Qualification Specification:

OCN NI Level 2 Diploma in Information Technology

- **Qualification No: 610/3860/X**

Version: 1.0

1. Specification Updates

Key changes have been listed below:

Section	Detail of change	Version and date of Issue

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3. Introduction to Open College Network Northern Ireland (OCN NI)

The Open College Network Northern Ireland (OCN NI) is a UK recognised awarding organisation based in Northern Ireland. We are regulated by CCEA Regulation to develop and award regulated professional and technical (vocational) qualifications from Entry Level up to and including Level 5 across all sector areas. In addition, OCN NI is also regulated by Ofqual to award qualifications in England.

OCN NI is also an educational charity that advances education by developing nationally recognised qualifications and recognising the achievements of learners. We work with centres such as Further Education Colleges, Private Training Organisations, Voluntary & Community Organisations, Schools, SME's and Public Sector bodies to provide learners with opportunities to progress into further learning and/or employment. OCN NI's Strategic Plan can be found on the OCN NI website www.ocnni.org.uk.

For further information on OCN NI qualifications or to contact us, you can visit our website at www.ocnni.org.uk. The website should provide you with details about our qualifications, courses, contact information, and any other relevant information you may need.

OCN NI Contact Details

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4. About this Specification

This specification details OCN NI's specific requirements for the delivery and assessment of the **OCN NI Level 2 Diploma in Information Technology**.

This specification will provide guidelines for centres to ensure the effective and correct delivery of this qualification. OCN NI qualification specifications are based on research and engagement with the practitioner community to ensure they provide appropriate skills and knowledge for learners.

The qualification specification will detail the following aspects of the OCN NI Level 2 Diploma in Information Technology:

- **Qualification Features**: this includes the key characteristics and features of this qualification, such as its intended audience, purpose, and credit value.

- **Centre Requirements:** this details the prerequisites and obligations that centres must fulfil to be eligible to deliver and assess this qualification. These include guidelines on staff qualifications, resources, and required procedures.

- **Structure and Content:** this details the structure and content of the qualification including units, and any specific content that learners will be required to study.

- **Assessment Requirements:** this details assessment criteria and assessment methods for this qualification, ensuring that summative assessment approaches are clear.

- **Quality Assurance:** the quality and consistency of delivery and assessment of this qualification are of paramount importance to OCN NI. The mandatory quality assurance arrangements including processes for internal and external verification that all centres offering this qualification must adhere to are detailed.

- **Administration:** guidance on the administrative aspects of delivering this qualification, including registration, certification, and record-keeping.

- Reference to other handbooks and policies as appropriate to the qualification.

It is important to note that OCN NI will communicate any significant updates or changes to this specification in writing to our Centres. Additionally, we will make these changes available on our official website at www.ocnni.org.uk.

To stay current, please refer to the online version of this specification as it is the most authoritative and up-to-date publication. Be aware that downloaded and printed copies may not reflect the latest revisions.

4.1 Additional Support

OCN NI offers a comprehensive range of support services designed to assist Centres in meeting the delivery and quality assurance requirements of OCN NI qualifications. These services include:

- **Learner Assessment Booklets**: These booklets are created to assist learners in demonstrating the fulfilment of assessment criteria and organising the quality assurance prerequisites for each individual unit.

- **Qualification Support Pack**: A support pack has been developed to support Centres in the delivery of this qualification. The pack includes, planning and assessment templates, guides to best practice, etc.

- **Professional Development for Educators**: OCN NI provides opportunities for professional development tailored to meet the various needs of practitioners and quality assurance staff. Centres can join our training sessions, available in both face-to-face and online formats, or explore a wealth of training materials by visiting www.ocnni.org.uk

- **OCN NI Subject Advisors**: Our team of subject advisors offers vital information and support to Centres. They provide guidance on specification details, non-exam assessment advice, updates on resource developments, and various training opportunities. They actively engage with subject communities through an array of networks to facilitate the exchange of ideas and expertise, to support practitioners to provide quality education programs to learners.

All centres can access information, support and guidance to support the delivery and quality assurance of this qualification by contacting their designated Business Development Advisor or by contacting us on Contact Us | OCN NI

5. About this Qualification

5.1 Qualification Regulation Information

Qualification Title: **OCN NI Level 2 Diploma in Information Technology**
Qualification Number: **610/3860/X**

Operational start date: **07 March 2024**
Operational end date: **28 February 2029**
Certification end date: **28 February 2031**

The qualification's operational start and end dates define the regulated qualification's lifecycle. The operational end date is the final date for learner registration, while learners have until the certificate end date to complete the qualification and receive their certificates.

It is important to note that all OCN NI regulated qualifications are listed on the Register of Regulated Qualifications (RQF), which can be found at Ofqual Register. This register is maintained by Ofqual in England and CCEA Regulation in Northern Ireland. It contains information about qualifications that are regulated and accredited. It is a key resource for learners, employers, and educational institutions to verify the status and recognition of qualifications.

Centres must adhere to administrative guidelines diligently, with special attention to the fact that fees, registration, and certification end dates for the qualification may be subject to changes. It is a centre's responsibility to make itself aware of updates on any modifications to ensure compliance with the latest requirements. OCN NI provides centres with timely updates through various channels including website, newsletters and through this specification. Information on qualification fees can be found on the Centre Login section of the OCN NI website www.ocnni.org.uk .

5.2 Sector Subject Area

A subject sector area is a specific category used to classify academic and vocational qualifications. Subject sector areas are part of the educational and qualifications framework to organise and categorise qualifications. The sector subject for this qualification is:

6.2 ICT for Users

5.3 National Occupational Standards

National Occupational Standards (NOS) are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding. This qualification is linked to:

NOS - Information Technology

5.4 Qualification Aim and Objective

The OCN NI Level 2 Diploma in Information Technology aims to equip learners with fundamental knowledge and practical skills in the field of information technology. This qualification is designed to provide a comprehensive understanding of computer systems, software applications, and digital tools commonly used in various industries. Upon successful completion, learners will be prepared to effectively use and troubleshoot IT systems, perform basic software operations, and navigate digital environments, setting a solid foundation for further studies or entry-level IT roles.

5.5 Target Learners

The OCN NI Level 2 Diploma in Information Technology has been designed for:

- learners aiming to advance to further or higher education in the field of information technology
- learners seeking entry into employment in the field of information technology

5.6 Entry Requirements

The OCN NI Level 2 Diploma in Information Technology does not have specific formal entry requirements. However, it is essential for Centres to ensure that learners possess the potential and opportunity to successfully attain the qualification.

Relevant skills and attributes for those pursuing careers in information technology include:

- a strong motivation to excel in an Information Technology (IT) career
- a willingness to acquire knowledge and skills and apply them effectively in the workplace
- the ability to complete the qualification
- effective communication skills with diverse individuals
- enjoyment in being part of a team
- problem-solving capabilities
- strong organisational skills and the ability to meet deadlines
- the capacity to work in a logical and methodical manner

Learners must be at least 16 years of age to be registered for this qualification.

5.7 Progression

The OCN NI Level 2 Diploma in Information Technology qualification provides knowledge and/or practical skills related to a range of IT professions. On completion of this qualification learners may progress to:

- other level 3 Information Technology qualifications
- employment in the field of Information Technology (IT)
- other non-IT sectors such as management, business skills, finance

5.8 Delivery Language

This qualification is exclusively available in English. If there is a desire to offer this qualification in Welsh or Irish (Gaeilge), we encourage you to get in touch with OCN NI. They will assess the demand for such provisions and, if feasible, provide the qualification in the requested language as appropriate.

6. Centre Requirements for Delivering this Qualification

6.1 Centre Recognition

New and existing OCN NI recognised centres must apply for and be granted approval to deliver these qualifications prior to the commencement of delivery.

6.2 Qualification Approval

Once a Centre has successfully undergone the Centre Recognition process, it becomes eligible to apply for qualification approval. The Centre's capability to meet and sustain the qualification criteria will be assessed. Throughout the qualification approval process, OCN NI will aim to ensure that:

- centres possess suitable physical resources (e.g., equipment, IT, learning materials, teaching rooms) to support qualification delivery and assessment
- centre staff involved in the assessment process have relevant expertise and/or occupational experience
- robust systems are in place for ensuring ongoing professional development for staff delivering the qualification
- centres have appropriate health and safety policies concerning learner equipment use
- qualification delivery by centres complies with current equality and diversity legislation and regulations
- as a part of the assessment process for this qualification, learners should have access to a practical work setting.

6.3 Centre Staffing

To offer this qualification centres are mandated to establish the following roles as a minimum, although a single staff member may serve in more than one capacity*:

- Centre contact
- Programme Co-ordinator
- Assessor
- Internal Verifier

*Note: An individual cannot serve as an Internal Verifier for their own assessments.

6.4 Tutor Requirements

Tutors responsible for delivering this qualification are expected to possess a high degree of occupational competency. They should meet the following criteria:

- **Occupational Competency:** Tutors should demonstrate a clear understanding of the subject matter, including up-to-date knowledge of the information technology industry. This competence should enable them to effectively impart knowledge and practical skills to learners.

- **Qualifications:** Tutors should hold qualifications at a level that is at least one level higher than the qualification they are teaching. This ensures that they have the necessary academic foundation to provide in-depth guidance and support to learners.

- **Relevant Industry Experience:** In addition to academic qualifications, tutors must have a minimum of three years of relevant, hands-on experience in the information technology industry.

These requirements collectively ensure that learners receive instruction from highly qualified and experienced instructors, thereby enhancing the quality and effectiveness of their educational experience in the information technology field.

6.5 Assessor Requirements

The assessment of this qualification takes place within the Centre and is subjected to OCN NI's rigorous quality assurance procedures. The achievement of individual units is based on the criteria defined in each unit.

Assessors play a pivotal role in ensuring the validity and fairness of assessments. They are required to meet the following criteria:

- **Occupational Competency:** Assessors should possess a high degree of occupational competency in the relevant subject matter. This expertise enables them to accurately evaluate and measure a learner's knowledge and skills. Additionally, they should hold qualifications at a level that is at least one level higher than the qualification they are assessing, ensuring their in-depth understanding of the subject matter.

- **Relevant Industry Experience:** A minimum of three years of practical experience in the information technology industry is a prerequisite. This practical background is essential for assessors to effectively evaluate a learner's capabilities in real-world contexts.

- **Assessment Expertise:** Assessors should have direct or related experience in the field of assessment. This includes knowledge of best practices in designing, conducting, and grading assessments. Their expertise ensures that assessments are both fair and valid.

- **Assessors Qualification:** Assessors should hold or be currently undertaking a recognised assessor's qualification; or must have attended the OCN NI Assessment Training.

- **Comprehensive Assessment Oversight:** Assessors are responsible for evaluating all assessment tasks and activities comprehensively. They must thoroughly review and assess each element to ensure a fair and accurate representation of a learner's skills and knowledge.

These rigorous requirements uphold the quality and integrity of the qualification's assessment process, ensuring that learners receive a fair and reliable evaluation of their information technology competencies.

6.6 Internal Verifier Requirements

The Internal Verifier plays a crucial role in the Centre's internal quality assurance processes. The Centre must designate a skilled and trained Internal Verifier who assumes the role of an internal quality monitor responsible for verifying the delivery and assessment of the qualifications.

The Internal Verifier for this qualification must meet the following criteria:

- **Relevant Industry Experience:** A minimum of three years of practical experience in the information technology industry is a prerequisite. This practical background is essential for assessors to effectively evaluate a learner's capabilities in real-world contexts.
- **Internal Verification Expertise:** Internal Verifiers should have direct or related experience in the field of verification. This includes knowledge of best practices in designing, conducting, and grading assessments. Their expertise ensures that assessments are both fair and valid.
- **Internal Verifiers Qualification:** Internal Verifiers should hold or be currently undertaking a recognised Internal Verifier's qualification; or must have attended the OCN NI Internal Verification Training.
- **Thorough Evaluation of Assessment Tasks and Activities:** Internal verifiers are tasked with conducting in-depth reviews and assessments of all assessment tasks and activities. Their responsibility is to ensure a comprehensive and meticulous oversight of each element to guarantee a just and precise reflection of a learner's abilities and knowledge and to ensure that all assessment and quality assurance requirements are fulfilled.

7. Qualification Structure

7.1 Qualification Purpose

The OCN NI Level 2 Diploma in Information Technology is a unitised qualification. Each unit is graded on a scale of Pass, Merit, Distinction, or Not Achieved. Achieving the OCN NI Level 2 Diploma in Information Technology places a strong emphasis on the depth of study and practical skill acquisition within each unit. Learners are expected to demonstrate a comprehensive understanding of the subject matter, ensuring a level of proficiency. The qualification also prioritises the acquisition of practical skills relevant to the Information Technology field, equipping learners with the capabilities required for employment in the sector.

The knowledge and skills obtained also provide a solid foundation for progression to higher education, ensuring that learners are well-prepared for further study in Information Technology. This comprehensive approach aims to produce individuals ready to meet the demands of the Information Technology industry.

7.2 Qualification Level

In the context of the OCN NI Level 2 Diploma in Information Technology, it's essential to understand the significance of qualification levels, as they play a pivotal role in assessing the depth and complexity of knowledge and skills required for successful attainment. This qualification aligns with Level 2, which signifies a moderate level of difficulty and intricacy. It's important to note that qualification levels in the educational framework range from Level 1 to Level 8, complemented by three 'entry' levels, namely Entry 1 to Entry 3.

Level 2 signifies that learners pursuing the Diploma in Information Technology are expected to engage with subject matter that requires a solid foundation in the basics of IT, as well as the capacity to tackle more intricate concepts and practical applications. This level corresponds to an intermediate stage where students will delve into a wide range of IT topics. The levels system serves as a valuable framework for gauging the depth and breadth of knowledge and skills that learners will acquire throughout their journey in the field of Information Technology. Understanding this structure allows both educators and learners to gauge the appropriate challenge and the educational value offered by this diploma, ensuring that it effectively prepares them for the demands of the IT sector.

7.3 Qualification Size

Total Qualification Time (TQT): 530 hours

This represents the total amount of time a learner is expected to spend to complete the qualification successfully. It includes both guided learning hours (GLH) and independent study or additional learning time.

Guided Learning Hours (GLH): 360 hours

These are the hours of guided instruction and teaching provided to learners. This may include classroom instruction, tutorials, or other forms of structured learning.

7.4 How to Achieve the Qualification

To achieve the OCN NI Level 2 Diploma in Information Technology, learners must meet the following credit requirements:

Total Credits Required: 53 credits

Learners must carefully select and complete the specific units from Group A and Group B as per the qualification requirements to accumulate the necessary credits. Once they have completed all the required units and earned at least 53 credits, they will have met the qualification requirements and will be awarded the OCN NI Level 2 Diploma in Information Technology.

Mandatory Units: 31 credits

Learners must complete all mandatory units to earn these 31 credits.

Group A Units: At least two units from Group A, totalling 16 credits.
Learners must choose and complete a minimum of two units from Group A to earn a total of 16 credits.

Group B Units: At least one unit from Group B, totalling 6 credits.
Learners must choose and complete at least one unit from Group B to earn a total of 6 credits.

8. Assessment Structure

This qualification is assessed through internal assessment and each unit is accompanied by specific assessment criteria that define the requirements for achieving a Pass, Merit, or Distinction grade. The qualification has been designed to facilitate progression from basic pass to merit and then distinction through the scaffolding of learning in each unit. This enables learners to build on a basic pass level of understanding of a unit's subject area and develop deeper and broader understanding supporting progression to merit and then distinction.

8.1 Assessment Guidance: Portfolio

The portfolio for this qualification is designed to provide a comprehensive view of a learner's skills and knowledge. It is a holistic collection of evidence that may include a single piece of evidence that satisfies multiple assessment criteria and spans across different units. There is no requirement for learners to maintain separate evidence for each assessment criterion.

When learners are creating their portfolio, they should refer to the assessment criteria to understand the evidence required. Explanations of command words/verbs used in the assessment criteria can be found in Appendix 1 of this document.

It is essential that the evidence in the portfolio reflects the application of skills in real-world situations. Learners should ensure that they provide multiple examples or references whenever the assessment criteria require it.

When demonstrating knowledge, learners can draw from their own organisation or another organisation they are familiar with to provide context.

8.2 Understanding the Units

The units outlined in this specification establish clear assessment expectations. They serve as a valuable guide for conducting assessments and ensuring quality assurance efficiently. Each unit within this specification follows a consistent structure. This section explains the operational framework of these units. It is imperative that all educators, assessors, Internal Verifiers, and other personnel overseeing the qualification review and familiarise themselves with this section to ensure a comprehensive understanding of how these units function.

- **Title:** The title will reflect the content of the unit and should be clear and concise.
- **Level:** A unit can have one of six RQF levels: Entry, One, Two, Three, Four or Five. All units within this qualification are level 2.

- **Credit Value:** This describes the number of credits ascribed to a unit. It identifies the number of credits a learner is awarded upon successful achievement of the unit. One credit is awarded for the learning outcomes which a learner, on average, might reasonably be expected to achieve in a notional 10 hours of learning.
- **Learning Outcome:** A coherent set of measurable achievements.
- **Assessment Criteria:** These enable a judgement to be made about whether or not, and how well, the students have achieved the learning outcomes.
- **Assessment Guidance and Methods:** These detail the different assessment methods within the unit that may be used.
- **Possible Content:** This provides indicative content to assist in teaching and learning.

8.3 Unit Grading Matrix

Learners must meet the unit assessment criteria to attain their desired grade for each unit, with "Not Achieved" indicating that the criteria have not been met.

- To achieve **a pass** in a unit the learner must have successfully completed **all the pass** assessment criteria in that unit.

  Learners achieving a pass should have a sound knowledge and understanding of the area being assessed, the majority of assessment criteria (AC) are at pass level. Learners meeting all learning outcomes at pass standards stated in the AC in a unit will gain a pass for that unit.

- To achieve **a merit** in a unit the learner must have successfully completed **all the pass and merit** criteria in that unit.

  Learners achieving a merit will have demonstrated that they can complete more complex tasks beyond the pass level; there are fewer ACs at these levels. Learners meeting all learning outcomes at pass standards, and where available also at merit standards stated in the AC in a unit will gain a merit for that unit.

- To achieve **a distinction** in a unit the learner must have successfully completed all the **pass, merit and distinction** criteria in that unit.

  Learners achieving a distinction will have demonstrated they can complete more complex tasks at a consistently high level, beyond the merit level; there are fewer ACs at these levels. Learners meeting all learning outcomes at pass standards, and where available also at merit and distinction standards stated in the AC in a unit will gain a distinction for that unit.

Unit Assessment Criteria	Pass Criteria	Merit Criteria	Distinction Criteria
Unit Grade Awarded: Pass	All criteria met	Some / No criteria met	Some / No criteria met
Unit Grade Awarded: Merit	All criteria met	All criteria met (where applicable)	Some / No criteria met
Unit Grade Awarded: Distinction	All criteria met	All criteria met (where applicable)	All criteria met (where applicable)

This internal assessment structure ensures that learners' performance is rigorously evaluated and graded according to the specified criteria for each unit, providing a clear and standardised method for measuring their level of achievement within the qualification.

8.4 Qualification Grading Matrix

In the process of earning grades for the OCN NI Level 2 Diploma in Information Technology, learners accumulate points by successfully completing individual units, and these points are then aggregated and converted into an overall qualification grade. The grading system is structured to reward learners based on their performance across various units within the qualification. A detailed breakdown of the points allocated for achieving Pass, Merit, and Distinction in each unit can be found in the following table. This provides a transparent framework for assessing and recognising the extent of a learner's knowledge and skills in Information Technology.

This point-based system ensures that learners are evaluated comprehensively and fairly, reflecting their proficiency and excellence in specific aspects of the qualification. It serves as a valuable tool for both learners and assessors, enabling them to measure and communicate the academic and practical accomplishments within this Information Technology qualification.

Unit Title	Unit Code	Credit Value	Points per unit grade		
			Pass	Merit	Distinction
IT Essentials	H/651/0396	8	40	48	56
IT Systems	F/651/0411	8	40	48	56
IT Applications	K/651/0414	8	40	48	56
Practical IT Project	L/651/0415	7	35	42	49
Understanding Cyber Security	R/651/0417	8	40	48	56
Database Development	T/651/0418	8	40	48	56
Installing, Configuring and Maintaining Small IT Networks	J/651/0422	8	40	48	56
Designing and Implementing Spreadsheet Based Business Solutions	J/651/0431	8	40	48	56
2D Games Development	L/651/0433	8	40	48	56
Website Development	T/651/0436	8	40	48	56
Understanding Emerging Technology	A/651/0447	6	30	36	42
Graphic Design	D/651/0448	6	30	36	42

To determine the overall qualification grade for the OCN NI Level 2 Diploma in Information Technology, the points achieved in each individual unit are summed, and this cumulative score is then translated into a final qualification grade.

This conversion process is facilitated by a predefined grading table, which establishes the criteria for awarding specific grades. By aggregating the points from each unit, this system offers a comprehensive assessment of a learner's performance throughout the qualification.

Points range	Qualification grade*
265 - 296	Pass
297 - 349	Merit
350 and above	Distinction

*Accumulation of Learner unit score = Qualification Grade

9. Qualification Summary by Unit

Total Qualification Time (TQT) for this qualification: 530 hours
Guided Learning Hours (GLH) for this qualification: 360 hours

To achieve the OCN NI Level 2 Diploma in Information Technology learners must successfully complete 53 credits to include:

- all mandatory units (31 credits),
- at least two of the units from Group A (16 credits) and
- at least one of the units from Group B (6 credits)

Unit Reference Number	OCN NI Unit Code	Unit Title	Credit Value	GLH	Level
Mandatory units					
H/651/0396	CBG568	IT Essentials	8	60	Two
F/651/0411	CBG569	IT Systems	8	60	Two
K/651/0414	CBG570	IT Applications	8	60	Two
L/651/0415	CBG571	Practical IT Project	7	30	Two
Group A units					
R/651/0417	CBG572	Understanding Cyber Security	8	60	Two
T/651/0418	CBG573	Database Development	8	60	Two
J/651/0422	CBG574	Installing, Configuring and Maintaining Small IT Networks	8	60	Two
J/651/0431	CBG575	Designing and Implementing Spreadsheet Based Business Solutions	8	60	Two
L/651/0433	CBG576	2D Games Development	8	60	Two
T/651/0436	CBG577	Website Development	8	60	Two
Group B units					
A/651/0447	CBG578	Understanding Emerging Technology	6	30	Two
D/651/0448	CBG579	Graphic Design	6	30	Two

10. Unit Content

Title	IT Essentials
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG568
Unit Reference No	H/651/0396
Learn Direct Code	CN0
Unit purpose and aim(s): This unit will enable the learner to understand the benefits of using Information Technology (IT) including key concepts regarding computer hardware, software, and safety along with examining social media platforms.	

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Understand the benefits of using IT for individuals and businesses.	1.1. Describe the benefits of using IT for individuals and businesses.		
2. Understand computer hardware and software fundamentals.	2.1. Describe the main components of a computer and associated peripherals. 2.2. Describe the main types of software and the key features of each.	2.M.1 Compare and contrast the different types of computer platforms.	
3. Understand networking fundamentals.	3.1. Describe different types of networks and the key features of each.	3.M.1 Analyse the benefits of using a network for a given business.	3.D.1 Evaluate the benefits to a business of connecting the network identified in AC 3.M.1 to cloud based applications.
4. Understand IT security.	4.1. Describe what is meant by IT security, why it is important and how to stay safe online.	4.M.1 Analyse why business data security is important and key features of secure business systems.	
5. Understand social media platforms and their functionality.	5.1. Describe the main social media platforms and their functionality.	5.M.1 Analyse the positive and negative aspects of using social media for an individual and businesses.	5.D.1 Evaluate how two of the negative aspects of using social media identified in AC 5.M.1 may be addressed. 5.D.2 Evaluate how social media can be implemented effectively in a business.

Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	**Definition**	**Possible Content**
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit IT Essentials - Content
1. Understand the benefits of using IT for individuals and businesses.	Content is to be taught in relation to a general business context. This will include: • The impact of the streamlining of business processes and the automating of tasks to improve productivity and time on business efficiency and productivity. By streamlining tasks and processes, individuals are able to work more efficiently and businesses to operate with fewer resources and the consequent economic benefit. • The role of IT in enabling businesses and individuals to connect with people worldwide to increases market reach and opportunities thus operating with fewer resources. • How IT informs and supports businesses and individuals to make decisions which can optimise growth opportunities and increase competitive advantages for different and consequently enhance career opportunities for individuals. This must refer to accessing a global market, thus helping businesses reach a wider customer base and expand their opportunities for growth. • The impacts of IT in the improvement of the efficiency of data management including the storage and retrieval of information. This must consider how data management empowers individuals and businesses to make informed decisions and gain valuable insights by analysis of large volumes of data thus improving decision-making processes. • How all processes covered support improvement in customer service and experience. **Sufficiency (pass)** **Assessment Criteria:** 1.1. Describe the benefits of using IT for individuals and businesses. Learners will evidence an understanding of: • The potential of IT applications to increase efficiency for businesses and individuals by streamlining processes, automating tasks where appropriate to improve productivity and time. • Processes whereby businesses and individuals are enabled to connect with people worldwide thus increasing market reach and opportunities. • Mechanisms through which businesses and individuals can make decisions to optimise growth opportunities and increased competitive advantages within a general business context, and through which career opportunities for individuals may be enhanced.

2. Understand computer hardware and software fundamentals.	**Scope**
	• A comprehensive range of standard hardware components and peripherals and software features should be taught.
	• This must include a range of non-specialised commonly accessed hardware items to include the central processing unit (CPU), memory (RAM), storage devices, input devices, and output devices.
	• Current standard versions of the following:
	  ○ Windows PC
	  ○ Macintosh (Mac)
	  ○ Mobile devices
	  ○ Cloud computing platforms
	  ○ Virtual machines

and relevant examples of utility software such as a password manager, data management software such as MS Access, and multi-media software such as MS PowerPoint

- The purpose and functionality of the software rather than a specific level competence in use should be addressed. Possible software to include:
  - operating systems
  - application software
  - utility software
  - data management software
  - multi-media software

Sufficiency (pass)

Assessment Criteria:

2.1 Describe the main components of a computer and associated peripherals.

Learners will evidence an understanding of:

- The identity and function of a range of hardware devices and software features to include utility software, data management, and multimedia software and a comparison of commonly used operating systems.
- Hardware as consisting of physical components of a computer system and identify internal hardware devices, external hardware devices and peripherals.
- Software as programs for controlling the operation of a computer or processing of electronic data and identify the two types of software – applications software and system software with examples of utility, data management and multi-media software.

Sufficiency (pass)

Assessment Criteria:

2.2. Describe the main types of software and the key features of each.

Types of software including key features should be drawn from the following:

- operating systems
- application software
- utility software
- data management software
- multi-media software

Sufficiency (merit)

Assessment Criteria:

2.M.1 Compare and contrast the different types of computer platforms.

Comparing the features of computer platforms and examples must include at least two of the following:

- Windows PC
- Macintosh (Mac)
- Mobile devices
- Cloud computing platforms
- Virtual machines

3. Understand networking fundamentals.	**Scope** This will be taught within the context of standard network types: PAN (Personal Area Network), LAN (Local Area Network), WAN (Wide Area Network), and VPN (Virtual Private Network). It must include the following content: • The role of essential networking components, such as routers, switches, cables, and protocols, explaining their roles in data transmission. • How virtual machines support storage, and networking, allowing businesses to scale resources up or down as needed, thus reducing infrastructure costs. • How cloud services are typically accessible on a self-service, on-demand basis, enabling rapid deployment of applications and services without the need for extensive hardware. • Consideration of the benefits of pay-as-you-go pricing models, allowing businesses to pay only for the resources they use. • How accessibility of cloud services enables remote work, collaboration, and flexibility. **Sufficiency (pass)** **Assessment Criteria:** 3.1. Describe different types of networks and the key features of each. Learners will evidence an understanding of: • The structure and functionality of each specified network type. • The advantages and disadvantages of using different types of computer to access a network. **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Analyse the benefits of using a network for a given business. For a given business the learner should detail how networks support the following: • How networks improve communications for businesses • Improvements in efficiency of resource sharing • The centralisation of business data management • Facilitation of business scalability and growth **Sufficiency (distinction)** **Assessment Criteria:** 3.D.1 Evaluate the benefits to a business of connecting the network identified in AC 3.M.1 to cloud based applications. The learner should include a detailed answer that references the following: • How virtual machines, storage, and networking allow businesses to scale resources up or down as needed, thus reducing infrastructure costs. • How cloud services are typically accessible on a self-service, on-demand basis, enabling rapid deployment of applications and services without the need for extensive hardware. • Options including the benefits of pay-as-you-go pricing models, allowing businesses to pay only for the resources they use. • How cloud services enable remote work, collaboration and flexibility by accessed from anywhere with an internet connection.

4. Understand IT security.	**Scope** Teaching should review measures and practices used to protect information technology systems, data, and networks from unauthorised access, breaches, and cyber threats. This should include: • The importance of safeguarding sensitive data, maintaining operational integrity, and preventing costly disruptions or breaches caused by cyberattacks. • Foundational security concepts, including confidentiality, integrity, availability, authentication, and authorisation, and the value of strong passwords and Two-Factor Authentication, regular software updates and safe browsing habits. • It will introduce common cybersecurity threats, such as malware, phishing, and ransomware, and explain how they work. **Sufficiency (pass)** **Assessment Criteria:** 4.1. Describe what is meant by IT security, why it is important and how to stay safe online. Learners will evidence an understanding of: • The importance of safeguarding sensitive data, maintaining operational integrity, and preventing costly disruptions or breaches caused by cyberattacks. • Measures and practices used to protect information technology systems, data, and networks from unauthorised access, breaches, and cyber threats. • The character and benefits of strong passwords • The process of Two-Factor Authentication (2FA) • The benefits of regular software updates • What are safe browsing habits **Sufficiency (merit)** **Assessment Criteria:** 4.M.1 Analyse why business data security is important and key features of secure business systems. The learner should include a detailed answer that references the key features and importance of the following: • confidentiality • integrity • availability • compliance
5. Be aware of social media platforms and their functionality.	**Scope** Learning should explore commonly used social media platforms to include Instagram, TikTok, and Facebook, which will provide the context for the following: • Consideration of commercial utilisation of platforms in terms of brand visibility and marketing, customer interaction and engagement, and data analytics.

- How a well-defined social media strategy is developed which can lead to the creation of engaging content which can be enhance by analytic processes.
- The range of both positive and negative aspects of social media usage.

Learners will be taught evaluation techniques.

Sufficiency (pass)

Assessment Criteria:

5.1. Describe the main social media platforms and their functionality.

Learners will evidence an understanding of:

- The use of commonly used Social Media platforms in a commercial context and how this can be strategically enhanced.
- The benefits and risks associated with social media use for the individual.

Sufficiency (merit)

Assessment Criteria:

5.M.1 Analyse the positive and negative aspects of using social media for an individual and businesses.

Learners should refer to the positive and negative aspects of social media which may include the following:

- Connection and communication
- Information and awareness
- Network and career opportunities
- Creative expression
- Privacy concerns
- Addiction and time-wasting
- Filter bubbles and echo chambers
- Marketing and brand exposure
- Customer engagement
- Data insights
- Negative publicity
- Resource intensity
- Algorithm changes

Sufficiency (distinction)

Assessment Criteria:

5.D.1 Evaluate how at least two of the negative aspects of using social media identified in AC 5.M.1 may be addressed.

Learners will evidence research on how two of the negative aspects of using social media may be addressed.

5.D.2 Evaluate how use of social media can be implemented effectively in a business.

Learners will include reference to the following:

- Increased brand visibility
- Engagement and customer interaction
- Cost effective marketing
- Data analytics and market insights

Title	IT Systems
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG569
Unit Reference No	F/651/0411
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to understand different types of computer hardware and software used in a small home or business office environments including installation and configuration.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Understand different computer hardware components used in a small home or business office environment.	1.1. Describe six different computer hardware components used in a small home or business office environment.	1.M.1 Compare and contrast the functionality of at least two different computer hardware components identified in AC 1.1.	1.D.1 Evaluate the suitability of different computer hardware components to be used in a given small home or business office environment to address given client needs.
2. Understand different types of computer software used in a small home or business office environment.	2.1. Describe different types of computer software typically used in a small home or business office environments.	2.M.1 Compare and contrast the functionality of at least two different computer software types identified in AC 2.1.	2.D.1 Evaluate the suitability of different computer software to be used in a given small home or business office environment to address given client needs.
3. Be able to install and configure hardware.	3.1. Install and configure at least two different hardware components on a standalone desktop or laptop computer.	3.M.1 Install and configure at least two different hardware components on a small home or business office network.	
4. Be able to install and configure software.	4.1. Install and configure at least two different types of computer software on a standalone desktop or laptop computer	4.M.1 Install and configure at least two different types of computer software on a small home or business office network.	
5. Be able to test a computer system.	5.1. Perform testing on a given computer system.	5.M.1 Use results from testing carried out in AC 5.1 and make recommendations to improve performance.	5.D.1 Use recommendations for improving performance identified in AC 5.M.1 and implement changes to a given computer system, evaluating the impact of changes made on performance.

Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	**Definition**	**Possible Content**
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit IT Systems - Content
1. Understand different computer hardware components used in a small home or business office environment.	**Scope** Content is to be taught within the context of a small home office or business environment. This will include: • A comprehensive range of standard hardware components. • Awareness of the use and suitability of a range of common computer hardware equipment which would be identified with a small home office or business environment. • Identification and function of hardware components, a comparison of their function, and the suitability of each application according to specified needs. **Sufficiency (pass)** **Assessment Criteria:** 1.1. Describe six different computer hardware components used in a small home or business office environment. Six hardware components from the following list: • motherboard • processor • hard drive • internal memory • monitor • keyboard • mouse • web camera • printer and scanner • external storage device • network hub **Sufficiency (merit)** **Assessment Criteria:** 1.M.1 Compare and contrast the functionality of at least two different computer hardware components identified in AC 1.1. Learners will evidence an understanding of: • The comparative features of two of the components from the AC 1.1 list for a small home office or business environment. **Sufficiency (distinction)** **Assessment Criteria:** 1.D.1 Evaluate the suitability of different computer hardware components to be used in a home or business office environment to address given client needs. Within the context of small home or business environment learners will: • Research and develop a hardware equipment list against a specified client brief. • Evaluate the suitability of the equipment identified.

<table>
<tr>
<td>2. Understand different types of computer software used in a small home or business office environment.</td>
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Scope

Content is to be taught within the context of a small home office or business environment.

This will include:

- A comprehensive range of standard hardware components within the categories of operating systems, application software, utility software, data management software, and multi-media software.
- Awareness of the use and suitability of a range of common computer software which would be identified with a small home office or business environment.
- The identification and function of software, a comparison of their function, and the suitability of each application according to specified needs.

Sufficiency (pass)

Assessment Criteria:

2.1. Describe different computer software typically used in a small home or business office environments.

Categories of software components to be considered should include:

- operating systems
- application software
- utility software
- data management software
- multi-media software

Sufficiency (merit)

Assessment Criteria:

2.M.1 Compare and contrast the functionality of at least two different computer software types identified in AC 2.1.

Within the context of small home or business environment learners will evidence an understanding of:

- The comparative features of two of the software categories from the AC 1.1 list for a small home office or business environment.

Sufficiency (distinction)

Assessment Criteria:

2.D.1 Evaluate the suitability of different computer software to be used in a given small home or business office environment to address given client needs.

Within the context of small home or business environment learners will:

- Research and develop a list of software requirements against a specified client brief.
- Evaluate the suitability of the software identified.

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<td>3. Be able to install and configure hardware.</td>
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Scope

Content is to be taught within the context of a small home office or business environment.

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	This will include: • The installation of hardware components to a computer system to include additional memory, graphics cards, and external storage devices. • The configuration of selected hardware components. **Sufficiency (pass)** **Assessment Criteria:** 3.1. Install and configure at least two different hardware components on a standalone desktop or laptop computer. Learners will be required to demonstrate the full installation and configuration of hardware components on a desktop or laptop. This should include installation of two of the following: • additional memory • graphics cards • external storage devices **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Install and configure at least two different hardware components on a small home or business office network. Learners will be required to demonstrate the full installation and configuration of hardware components on a network. This should include installation of two of the following: • printer and scanner • external storage device • network hub
4. Be able to install and configure software.	**Scope** Content is to be taught within the context of a small home office or business environment. This will include: • The installation of software to a computer system selected from categories of operating systems, application software, utility software, data management software, and multi-media software. • The configuration of selected software. **Sufficiency (pass)** **Assessment Criteria:** 4.1. Install and configure at least two different types of computer software on a standalone desktop or laptop computer. Learners will be required to demonstrate the full installation and configuration of software on a desktop or laptop. This should include installation of two of the following: • operating systems • application software • utility software • data management software

	• multi-media software **Sufficiency (merit)** **Assessment Criteria:** 4.M.1 Install and configure at least two different types of computer software on a small home or business office network. Learners will be required to demonstrate the full installation and configuration of software on a network to enable access by multiple users. This should include installation of two of the items from the AC 4.1 list.
5. Be able to test a computer system.	**Scope** • Learners will be taught to perform basic tests in a methodical and consistent manner on the performance of a standard computer system which would typically be used in a small home or office environment. These tests will include general computer performance, network connectivity, and security. • Interpretation of test data to implement basic changes to produce improvements in performance. **Sufficiency (pass)** **Assessment Criteria:** 5.1. Perform testing on a given computer system. The learner will be required to demonstrate the following tests on a computer system: • computer performance • basic network connectivity • basic computer security **Sufficiency (merit)** **Assessment Criteria:** 5.M.1 Use results from testing carried out in AC 5.1 and make recommendations to improve performance. The learner will interpret the results of the tests carried out for AC 5.1 to make recommendations for improvements to the performance of the computer system. **Sufficiency (distinction)** **Assessment Criteria:** 5.D.1 Use recommendations for improving performance identified in AC 5.M.1 and implement for a given computer system. The learner will implement changes identified above to produce measurable improvements to the performance of the computer system.

Title	IT Applications
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG570
Unit Reference No	K/651/0414
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to understand IT applications. The learner will also develop a programming solution.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Understand different application development methodologies.	1.1. Explain at least two application development methodologies.	1.M.1 Analyse the advantages and disadvantages of one of the application development methodologies identified in AC 1.1.	
2. Be able to design a computer application.	2.1. Design a computer application to meet the requirements of a given client brief.		
3. Be able to create a computer application from a design.	3.1. Create a computer application from the design developed in AC 2.1.	3.M.1 Analyse how the computer application developed in AC 3.1 exhibits the features of good software design illustrated in AC 3.M.1 identifying areas for improvement and making modifications as required.	
4. Be able to test and use test results to improve a computer application.	4.1. Illustrate the main steps involved in testing a computer application. 4.2. Plan and carry out the testing of the computer application created in AC 3.1 identifying areas for improvement.	4.M.1 Use findings from testing carried out in AC 4.2 to improve the computer application.	4.D.1 Carry out user testing of computer application tested in AC 4.M.1 identifying possible areas for improvement and modify as required. 4.D.2 Evaluate the computer application against the given client brief.

Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	**Definition**	**Possible Content**
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit IT Applications - Content
1. Understand different application development methodologies.	**Scope** Two application methodologies from Waterfall, Agile, DevOps, and Rapid Application Development will be selected to be taught. This will provide the basis for this learning outcome. This learning will allow evaluation of methodologies in terms of their flexibility, speed of development, transparency, and supporting documentation. **Sufficiency (pass)** **Assessment Criteria:** 1.1. Explain at least two application development methodologies. Learners will evidence an understanding of two of the following application development methodologies: • Waterfall • Agile • DevOps • Rapid Application Development **Sufficiency (merit)** **Assessment Criteria:** 1.M.1 Analyse the advantages and disadvantages of one of the application development methodologies identified in AC 1.1. Learners will evidence an understanding of the advantages and disadvantages of an application development methodology selected from AC 1.1 with reference to: • flexibility • speed of development • transparency • documentation
2. Be able to design a computer application.	**Scope** Content to be taught will enable learners to produce a design for a computer application that will meet the requirements of a client brief. This will include: • What is a client brief and how should this be interpreted into design requirements • How to evaluate choices made in design • A range of application features • Design processes used in development of a computer solution including storyboards, wireframe, and pseudocode **Sufficiency (pass)** **Assessment Criteria:** 2.1. Design a computer application to meet the requirements of a given client brief.

	Learners will evidence an understanding of how a computer solution is designed to meet the requirements of a client brief. The client brief will require the learner to develop an application that has the following features: • working with numeric and string data types: • numeric (working with different number formats, e.g., integer, float, double) • string, character • variables, constants, and Boolean and arithmetic operators • input, output, and assignment statements • use of simple selection statements The design of the computer solution will include: • problem statement • user needs • purpose • inputs • processes • outputs The design will also include one or more of the following: • storyboards • wireframes • pseudocode
3. Be able to create a computer application from a design.	**Scope** • Utilisation of computer application development processes to a sufficient standard to create a functional computer application. • The features of good software design to include modularity, simplicity, flexibility, efficiency, maintainability, and user-centred functionality. • How to evaluate design performance. **Sufficiency (pass)** **Assessment Criteria:** 3.1. Create a computer application from the design developed in AC 2.1. The learner will develop a computer application which is basic in nature, but which will include the features listed in AC 2.1. **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Analyse how the computer application developed in AC 3.1 exhibits the features of good software design illustrated in AC 3.M.1 identifying areas for improvement and making modifications as required. The learner will produce an analysis of their computer application in relation to the features of good software design listed in 3.M.1 and implement identified modifications to make measurable improvements.

	Features of good software design which include: • modularity • simplicity • flexibility • efficiency • maintainability • user-centred functionality
4. Be able to test and use test results to improve a computer application.	**Scope** • Learners will be taught how to perform testing in a methodical and consistent manner. • A comprehensive range of computer application testing processes should be taught which include the principle and practice of test planning, test design, test execution, and defect reporting. • Learners will be taught how to implement the outcome of testing in modifications to the application. • Requirements for effective evaluation of application development. Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 4.1. Illustrate the main steps involved in testing a computer application. The learner will identify and carry out the following steps in the testing of a computer application: • test planning • test design • test execution • defect reporting **Sufficiency (pass)** **Assessment Criteria:** 4.2. Plan and carry out the testing of the computer application created in AC 3.1, to identify areas for improvement. Learners will evidence an understanding of processes required to test the functionality of a computer application. **Sufficiency (merit)** **Assessment Criteria:** 4.M.1 Use findings from testing carried out in AC 4.2 to improve the computer application. The learner will interpret the results of the tests carried out above to implement improvements to the functionality of the computer application. **Sufficiency (distinction)** **Assessment Criteria:** 4.D.1 Carry out user testing of computer application tested in AC 4.M.1 identifying possible areas for improvement and modify as required.

	Further user testing should be performed by others with the findings recorded by the learner to support the learner making further measurable improvements to the application. **Sufficiency (distinction)** **Assessment Criteria:** 4.D.2 Evaluate the developed solution against the given client brief. The learner will produce a brief report on how the final solution addresses the client brief.

Title	Practical IT Project
Level	Two
Credit Value	7
Guided Learning Hours (GLH)	30
OCN NI Unit Code	CBG571
Unit Reference No	L/651/0415
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to research, develop and present an IT solution for a given IT problem according to a client brief.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Be able to research solutions to IT problems.	1.1. Research different IT solutions (at least two) for given IT problems detailed in client briefs. 1.2. Use research carried out in AC 1.1 to select an appropriate IT solution for client briefs detailed in AC 1.1.	1.M.1 Analyse possible solutions to each of the problems identified in AC 1.1 using a decision-making matrix.	
2. Be able to plan, develop and test a prototype solution for an IT problem.	2.1. Produce a plan for the development and testing of the one of the IT problems identified in AC 1.2. 2.2. Develop and test the prototype solution in line with plan produced in AC 2.1.		
3. Be able to evaluate an IT solution.	3.1. Assess the prototype solution developed in AC 2.2 against the client brief.	3.M.1 Use assessment carried out in in AC 3.1 to identify areas for improvement including how these may be incorporated into the solution.	3.D.1 Evaluate the solution and development process to determine with justification if the IT solution selected in AC 1.2 was the optimal solution and how the development process may be improved. 3.D.2 Present evaluation carried out in AC 3.D.1.

Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	**Definition**	**Possible Content**
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit Practical IT Project - Content
1. Be able to research solutions to IT problems.	**Scope** Approach to the delivery of IT solutions to meet the requirements of a stated client brief that would typically be encountered in industry. Learner will then develop approach to enable decision-making to select optimal solutions with clear justifications. **Sufficiency (pass)** **Assessment Criteria:** 1.1. Research two different IT solutions for given IT problems detailed in client briefs. Learners will evidence an understanding of appropriate IT solutions based upon research for client brief that would typically be encountered in industry. For example: • A networked office environment involving the design and/or installation and maintenance of a new or existing IT system. **Sufficiency (pass)** **Assessment Criteria:** 1.2. Use research carried out in AC 1.1 to select and justify an appropriate IT solution for client briefs detailed in AC 1.1. Learners will interpret their research into the selection of the most appropriate solution that would meet the demands of the client brief. Justification for this decision must be provided. **Sufficiency (merit)** **Assessment Criteria:** 1.M.1 Analyse possible solutions to each of the problems identified in AC 1.1 using a decision-making matrix. Learners must produce a decision matrix to analyse possible solutions from which the appropriate computer solution will be selected.
2. Be able to plan, develop and test a prototype solution for an IT problem.	**Scope** Learners will be taught how to plan and perform testing in a methodical and consistent manner including processes for the development and testing of IT solutions. This will include a testing plan for solutions which will lead to the identification of further possible improvements. **Sufficiency (pass)** **Assessment Criteria:** 2.1. Produce a plan for the development and testing of one of the IT solutions identified in AC 1.2. Learners will produce and implement a report detailing a development and testing plan for the computer solution identified in AC 1.2.

	Sufficiency (pass) **Assessment Criteria:** 2.2. Develop and test the prototype solution in line with plan produced in AC 2.1. The learner will develop and test the prototype solution.
3. Be able to evaluate an IT solution.	**Scope** Evaluation processes appropriate to IT solutions and standards of reporting will be taught. This will ensure that evaluation is structured to identify optimal solutions, leads to proposals for further improvement, and is fully justified. Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 3.1. Assess the prototype solution developed in AC 2.2 against the client brief. Learners will develop an evaluation report of the computer solution with reference to the requirements of the client brief. **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Use assessment carried out in in AC 3.1 to identify areas for improvement including how these may be incorporated into the solution. The report of AC 3.1 will be extended to include the identification of improvements and pathways for their implementation. **Sufficiency (distinction)** **Assessment Criteria:** 3.D.1 Evaluate the solution and development process to determine with justification if the IT solution selected in AC 1.2 was the optimal solution. The learner will undertake a review that reflects upon the researched solutions, which provides justification for the selection to determine if the solution chosen was the optimal choice. **Sufficiency (distinction)** **Assessment Criteria:** 3.D.2 Present evaluation carried out in AC 3.D.1. The evaluation of the solution will be presented in a format and manner appropriate for a business presentation.

Title	Understanding Cyber Security
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG572
Unit Reference No	R/651/0417
Learn Direct Code	CN0
Unit purpose and aim(s): This unit will enable the learner to understand the risks to IT security and how these may be prevented. The learner will also carry out security checks on different IT devices.	

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Understand cyber security for businesses.	1.1. Explain how the concepts of confidentiality, integrity, and availability inform cyber security for businesses. 1.2. Explain the main types of cyber security.	1.M.1 Analyse the possible impact on a given business of a cyber-attack	
2. Understand IT threats and vulnerabilities.	2.1. Describe the main threats and vulnerabilities in relation to IT security for businesses and individuals.	2.M.1 Compare and contrast different social engineering attack types.	2.D.1 Research recent cyber-attacks and evaluate their impact on individuals and businesses.
3. Be able to develop a security plan.	3.1. Explain the main types of cyber security controls. 3.2. Develop a security plan for a given scenario.	3.M.1 Analyse different security measures that may inform the enhancement of the security plan developed in AC 3.2.	
4. Be able to carry out security checks on an IT device.	4.1. Describe at least three different types of devices vulnerable to unauthorised access and how security may be improved for each. 4.2. Carry out a security check on one of the IT devices identified in AC 4.1 checking for possible unauthorised access.	4.M.1 Apply appropriate protection measures to minimise further risks to the device on which the security check was carried out in AC 4.2.	4.D.1 Evaluate the security check carried out in AC 4.2 and justify the protection measures applied in AC 4.M.1.

Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	**Definition**	**Possible Content**
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit Understanding Cyber Security - Content
1. Understand cyber security for businesses.	**Scope** Content is to be taught in relation to a general business context. This will include: Definition and importance of cybersecurity to business operation and how this is managed and monitored. Fundamental Concepts to be covered will include: • The CIA Triad (Confidentiality, Integrity, Availability) • Defence-in-depth and layered security • Principles of cryptography • Network security • Operating system security Types of cyber security will include: • Network Security • Operating System Security • Cryptography **Sufficiency (pass)** **Assessment Criteria:** 1.1. Explain how the concepts of confidentiality, integrity, and availability inform cyber security for businesses. Learners will evidence an understanding of: • Confidentiality as a process to ensure that information is accessible only to those who have the authorized permission to access it. • Integrity as a concept to ensure that information remains accurate, consistent, and trustworthy throughout its lifecycle. This will involve understanding the need to protect data from unauthorised modification, deletion or corruption. • Availability as a concept to ensure that information and resources are accessible and usable when needed by authorised users. This will involve prevention of disruptions, downtime, or denial-of-service attacks that could impact system functionality and performance. • How the CIA Triad (confidentiality, integrity, availability) coordinate to underpin business cyber security. **Sufficiency (pass)** **Assessment Criteria:** 1.2. Explain the main types of cyber security. Learners will evidence an understanding of: Network Security • Basics of network architecture and protocols • Firewalls, IDS/IPS systems • VPNs, secure communications • Wireless network security

	Operating System Security • Hardening OS platforms (Windows, Linux, macOS) • Patch management and updates • User authentication and authorisation Cryptography • Principles of encryption and decryption • Symmetric vs. asymmetric cryptography • Public key infrastructure (PKI) • Cryptographic protocols: SSL/TLS, SSH, VPNs **Sufficiency (merit)** **Assessment Criteria:** 1.M.1 Analyse the possible impact on a given business of a cyber-attack. This should include operational disruption, reputational damage and financial loss.
2. Understand IT threats and vulnerabilities.	**Scope** This must address the breadth of the cyber threat landscape to include: • Malware • Ransomware • Phishing • DDoS attacks Social Engineering attacks to include: • Impersonation • Account compromise • Thread hijacking Cyber-attack vectors and techniques must be covered, alongside an understanding of cyber threat actors: • Hacktivists • Nation-states • Cybercriminals **Sufficiency (pass)** **Assessment Criteria:** 2.1. Describe the main threats and vulnerabilities in relation to IT security for businesses and individuals. Learners will evidence an understanding of malware and ransomware attacks, Phishing and DoS attacks. **Sufficiency (merit)** **Assessment Criteria:** 2.M.1 Compare and contrast different social engineering attack types. Learner will be able to compare impersonation, account compromise and thread hijacking techniques.

	Sufficiency (distinction) **Assessment Criteria:** 2.D.1 Research recent cyber-attacks and evaluate their impact on individuals and businesses. Learners will identify high-profile cyber-attacks case studies and their impacts.
3. Be able to develop a security plan.	**Scope** Teaching content will provide an overview of the main types of cyber security control measures and how they may be incorporated into security plans. These will include: • Administrative controls • Technical controls to include firewalls, encryption and endpoint protection • Detective controls • Recovery controls to include backup and recovery and continuity planning **Sufficiency (pass)** **Assessment Criteria:** 3.1. Explain the main types of cyber security controls. Learners will evidence an understanding of a full range of cyber security control measures and how they can act to prevent or mitigate a cyber security attack. **Sufficiency (pass)** **Assessment Criteria:** 3.2. Develop a security plan for a given scenario. Learner will develop a security plan for a given situation using the following steps: • Risk analysis and assessment • Security goals and objectives • Security controls • Incident response and management • Review **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Analyse different security measures that may inform the enhancement of the security plan developed in AC 3.3. Learner will analyse the following measures: **Access control** • Network security • Endpoint security • Incident response • Back and recovery
4. Be able to carry out security checks on an IT device.	**Scope** Teaching will be in the context of IT devices that may be most vulnerable to cyber-attack. To be considered are: • Desktops, laptop, and servers • Mobile devices such as smartphones and tablets

- Network devices such as routers, switches and wireless access points
- Storage devices
- Peripheral devices

Learners will be taught to perform basic checks and implement possible protection in a methodical and consistent manner to include:

- Operating system security
- Network security
- Endpoint security
- Access controls
- Hardware and software security

Learners will be taught evaluation techniques.

Sufficiency (pass)

Assessment Criteria:

4.1. Describe at least three different types of devices vulnerable to unauthorised access and how security may be improved for each.

Learners will evidence an understanding of commonly accessed devices that are most vulnerable to unauthorised access, such as desktop computers, smartphones, and network devices.

Sufficiency (pass)

Assessment Criteria:

4.2. Carry out a security check on one of the IT devices identified in AC 4.1 checking for possible unauthorised access.

Learners will demonstrate an understanding of how to carry out a security check on one of the three devices identified in AC 4.1, such as checking unauthorised access to a smartphone or a network by auditing logs.

Sufficiency (merit)

Assessment Criteria:

4.M.1 Apply appropriate protection measures to minimise further risks to the device on which the security check was carried out in AC 4.2.

The learner will implement protection measures to include review of access controls, authentication, patch management and vulnerability assessments.

Sufficiency (distinction)

Assessment Criteria:

4.D.1 Evaluate the security check carried out in AC 4.2 and justify the protection measures applied in AC 4.M.1.

The learner will produce an evaluation of the security check to justify actions taken.

Title	Database Development
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG573
Unit Reference No	T/651/0418
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to understand how to develop and use databases.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Understand data types.	1.1. Describe different data types.	1.M.1 Compare and contrast the applications and uses of the different data types identified in AC 1.1.	
2. Understand the principles of database design.	2.1. Explain the principles of database design.		
3. Be able to develop a database solution.	3.1. Develop a database solution for a given client brief to include: a) creation of basic forms and reports to enter, edit, organise and retrieve data b) selection and use of appropriate tools and techniques to format data entry forms c) checking data entry meets needs using IT tools and making corrections as necessary d) respond appropriately to data entry errors	3.M.1 Justify the database solution developed in AC 3.1 evaluating how it addresses the client brief. 3.M.2 Develop a user manual for the database solution developed.	3.D.1 Use advanced techniques to create forms and reports including: a) validation b) formatted display of data c) calculated fields / outputs
4. Be able to test a database solution.	4.1. Test the database solution developed in AC 3.1.	4.M.1 Analyse the database solution tested in AC 4.1 against the client brief identifying areas for possible improvement and how these can be incorporated into solution.	4.D.1 Present the findings from AC 4.M.1 to include: a) database solution b) possible improvements c) software selection d) time management e) resources f) tools and techniques used

Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	**Definition**	**Possible Content**
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit Database Development - Content
1. Understand data types.	**Scope** Content is to be taught in relation to a general business relational database context which could utilise MS Access, MySQL or similar programme. This will overview of the structure of the relational database in terms of the data types that it can be comprised of. It will also consider data types in terms of internal comparison of function and application settings for their implementation. **Sufficiency (pass)** **Assessment Criteria:** 1.1. Describe different data types. Learners will evidence an understanding of the following data types and when it is appropriate to use them: • Integers • Characters • Strings • Floating-point numbers • Arrays • Boolean **Sufficiency (merit)** **Assessment Criteria:** 1.M.1 Compare and contrast the applications and uses of the different data types identified in AC 1.1. Learners will demonstrate an extension of the understanding of when to use data types identified in AC 1.1. by provision of a comparison of the functionality of the data types.
2. Understand the principles of database design.	**Scope** Teaching content will address the central principles of database design that are necessary to create a schema that can efficiently organise a dataset while ensuring data integrity and optimal performance in support of queries. **Sufficiency (pass)** **Assessment Criteria:** 2.1. Explain the principles of database design. Learners will understand the use and function of primary, secondary, and foreign keys and the following design principles: • Entity-relationship modelling • Indexing • Normalisation • Consistency

3. Be able to develop a database solution.	**Scope** Content to be taught will draw together theory and concepts addressed in LO1 and LO2. This will address database development to support entry, formatting, and retrieval of data, and processes to check accuracy and correct errors. Learners will cover the following: • basic forms and reports • formatting data entry forms • checking data entry needs using appropriate tools • correcting errors **Sufficiency (pass)** **Assessment Criteria:** 3.1. Develop a database solution for a given client brief to include: a) creation of basic forms and reports to enter, edit, organise and retrieve data b) selection and use of appropriate tools and techniques to format data entry forms c) checking data entry meets needs using IT tools and making corrections as necessary d) respond appropriately to data entry errors **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Justify the database solution developed in AC 3.1 evaluating how it meets the client brief. Learners will demonstrate and explain how the solution provided to the client brief in AC 3.1. satisfies its requirements. **Sufficiency (merit)** **Assessment Criteria:** 3.M.2 Develop a user manual for the database solution developed. This should be succinct and to the point with the learner providing clear explanation of the functionality of their solution with reference to the client brief using language and structure appropriate to technical manuals. **Sufficiency (distinction)** **Assessment Criteria:** 3.D.1 Use advanced techniques to create forms and reports including: a) validation b) formatted display of data c) calculated These techniques should be used within the context of the solution developed in AC 3.1.

4. Be able to test a database solution.	**Scope** Learners will be taught how to perform testing in a methodical and consistent manner including the principles of testing and evaluating the database solution including testing of: • Data Integrity • Backup and Recovery • Functionality • Usability Learners will be taught presentation techniques. **Sufficiency (pass)** **Assessment Criteria:** 4.1. Test the database solution developed in AC 3.1. The learner will demonstrate the testing of the function of the database against the requirements of the client brief. **Sufficiency (merit)** **Assessment Criteria:** 4.M.1 Analyse the database solution tested in AC 4.1 against the client brief identify areas for possible improvement and how these can be incorporated into solution. The learner will extend AC 4.1. to demonstrate analysis of the solution to identify realistic areas for possible improvement that could be introduced as modifications to the proposal. **Sufficiency (distinction)** **Assessment Criteria:** 4.D.1 Present the findings from AC 4.M.1 to include: a) software selection b) time management c) resources d) tools and techniques The presentation will be delivered in a format and manner appropriate for a business presentation.

Title	Installing, Configuring and Maintaining Small IT Networks
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG574
Unit Reference No	J/651/0422
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to understand how to install, configure and maintain networking equipment for small and home offices.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Understand IT networks.	1.1. Identify the main types of networks. 1.2. Describe how IT networks assist companies to communicate and share resources.	1.M.1 Explain the main types of IT network devices and security options.	1.D.1 Evaluate the potential impact and risks associated with the misconfiguration of IT network settings.
2. Be able to design a small IT network.	2.1. Design a small IT network to meet the requirements of a given small or home office including hardware and software.	2.M.1 Analyse the design developed in AC 2.1 identifying possible areas for improvement and making modifications to design as required.	2.D.1 Evaluate the design developed in AC 2.M.1 in terms of scalability including: a) additional users b) remote secure access c) back up d) levels of access e) making recommendations as to how they can be incorporated in future network upgrades
3. Be able to install and configure network hardware and software on a small IT network.	3.1. Summarise security precautions to be taken account of when configuring small IT networks. 3.2. Select appropriate network hardware and software in line with design developed in AC 2.1. 3.3. Install and configure network hardware and software in line with design developed in AC 2.1.		
4. Know how to test the operation of small networks.	4.1. Identify the help and troubleshooting facilities available to solve	4.M.1 Select networking testing tools and run appropriate tests on a given	4.D.1 Evaluate the network testing tools used in AC 4.M.1. 4.D.2 Evaluate the outcomes of tests carried out in AC 4.M.1 identifying possible

	networking problems. 4.2. Identify network testing tools and tests that may be used to check performance of networking systems.	IT network to test network performance.	improvements to network performance and making modifications as required.

Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit Installing, Configuring and Maintaining Small IT Networks - Content
1. Understand IT networks.	**Scope** Teaching content will cover the components and systems necessary to ensure connectivity, security and efficiency in the implementation and maintenance of a small IT network. Network devices will include the following: • Router • Switch • Access point • Network interface card • Network attached storage • Ethernet cable • Firewalls • Virtual Private Networks (VPN) • Intrusion Prevention Systems Learners will cover the impact of IT network misconfiguration. **Sufficiency (pass)** **Assessment Criteria:** 1.1. Identify the main types of networks. Learners will be able to identify the main types of computer networks, LAN, WAN etc **Sufficiency (pass)** **Assessment Criteria:** 1.2 Describe how IT networks assist companies to communicate and share resources. Learner will describe how networks provide a structured framework for the connection of systems and users and how this can enhance business function through: • Connectivity and remote access • Collaboration • Resource management • Security **Sufficiency (merit)** **Assessment Criteria:** 1.M.1 Explain the main types of IT network devices and security options. The learner will provide a detailed description of the following network devices including their function: • Router • Switch • Access point • Network interface card • Network attached storage

	• Ethernet cable • Firewalls • Virtual Private Networks (VPN) • Intrusion Prevention Systems **Sufficiency (distinction)** **Assessment Criteria:** 1.D.1 Evaluate the potential impact and risks associated with the misconfiguration of IT network settings. The learner will define configuration as the blueprint governing interaction between network components with misconfiguration as the failure of this. Proper configuration should support: • Optimal performance • Security • Reliability The learner should demonstrate an understanding of the impact to a business or home network if misconfiguration enables network intrusion or reduced performance.
2. Be able to design a small IT network.	**Scope** Teaching will address the principles of network design to cover requirements analysis, network manageability, scalability, and security. Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 2.1. Design a small IT network to meet the requirements of a given small or home office including hardware and software. Learner will design a secure network against a simple brief. This will include commonly utilised hardware and software items such as computer terminals, printers, scanners, routers, wireless access points. **Sufficiency (merit)** **Assessment Criteria:** 2.M.1 Analyse the design developed in AC 2.1 identifying possible areas for improvement and making modifications to design as required . Learner will provide analysis of the design developed in AC 2.1 including possible modifications. **Sufficiency (distinction)** **Assessment Criteria:** 2.D.1 Evaluate the design in AC 2.M.1 in terms of scalability including: a) additional users b) remote secure access

	c) back up d) levels of access e) making recommendations as to how they can be incorporated in future network upgrades
3. Be able to install and configure network hardware and software on a small IT network.	**Scope** Teaching will cover installation and configuration of network hardware and software for items commonly featuring on a small network, to include: • Router • Switch • Wireless Access Points • Firewalls • Network Operating Software **Sufficiency (pass)** **Assessment Criteria:** 3.1. Summarise security precautions to be taken account of when configuring small IT networks. Learners will understand the primary security precautions appliable to small networks. These will include: • Network Access Control using strong authentication and user privilege management • Firewall configuration • Network segmentation • Data encryption • Endpoint security • Wireless security **Sufficiency (pass)** **Assessment Criteria:** 3.2. Select appropriate network hardware and software in line with design developed in AC 2.1. The learner will select hardware and software in line with the design developed in AC 2.1. **Sufficiency (pass)** **Assessment Criteria:** 3.3. Install and configure network hardware and software in line with design developed in AC 2.1. Learner will be able to install and configure specified hardware and software.
4. Know how to test the operation of small networks.	**Scope** Learners will be taught how to perform the testing of a small network operation in a methodical and consistent manner to identify potential issues, validate configurations, and optimise network performance effectively. This will include: • Troubleshooting facilities • Ping test

- Traceroute test
- Bandwidth testing
- Load testing
- Security testing
- Firewall testing
- Service availability

Learners will be taught evaluation techniques.

Sufficiency (pass)

Assessment Criteria:

4.1. Identify the help and troubleshooting facilities available to solve networking problems.

Learner will be able to utilise network troubleshooting facilities.

Sufficiency (pass)

Assessment Criteria:

4.2. Identify network testing tools and tests that may be used to check performance of networking systems.

Learners will be able to identify appropriate network testing tools that are appropriate to areas of network performance to include:

- Network connectivity
- Bandwidth
- Security and vulnerability

Sufficiency (merit)

Assessment Criteria:

4.M.1 Select networking testing tools and run appropriate tests on a given IT network to test network performance.

Learners will be able to utilise network testing tools suitable to test areas of network performance to include:

- Network connectivity
- Bandwidth
- Security and vulnerability

Sufficiency (distinction)

Assessment Criteria:

4.D.1 Evaluate the network testing tools used in AC 4.M.1.

Learners will be able to evaluate the function of specified network testing tools.

Sufficiency (distinction)

Assessment Criteria:

4.D.2 Evaluate the outcomes of tests carried out in AC 4.M.1 identifying possible improvements to network performance and making modifications as required.

Learner will be able to identify areas for network performance improvement based upon test outcomes.

Title	Designing and Implementing Spreadsheet Based Business Solutions
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG575
Unit Reference No	J/651/0431
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to design and implement spreadsheet-based business solutions used for data modelling.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Pass
1. Understand how spreadsheets can be used for data modelling.	1.1. Describe what is meant by data modelling and how businesses can use it to inform decision making. 1.2. Describe the key functionality in spreadsheet software and how it may be used for data modelling.		
2. Be able to design a business spreadsheet solution.	2.1. Develop a design for a spreadsheet-based solution for a given business scenario to include: a) calculations / totals b) graphical displays of the data	2.M.1 Analyse the spreadsheet solution designed in AC 2.1 identifying possible areas for improvement and make modifications if required.	
3. Be able to develop business spreadsheet solutions.	3.1. Develop a spreadsheet-based solution for a given business scenario to include: a) sheet formatting / presentation b) use a range of formulae / functions c) graphical displays of business information	3.M.1 Analyse the spreadsheet solution developed in AC 3.1. identifying how use of advanced spreadsheet features can enhance its effectiveness as a data modelling tool	3.D.1 Implement advanced spreadsheet features identified in evaluation undertaken in AC 3.M.1 to enhance the spreadsheet solution's effectiveness as a data modelling tool.
4. Be able to plan and implement the testing of a spreadsheet-based business solution.	4.1. Plan and implement the testing of the spreadsheet-based business solution developed in LO 3 documenting outcomes of tests carried out.	4.M.1 Use outcomes of testing carried out in AC 4.1 to inform the evaluation of the effectiveness of the spreadsheet solution developed and approaches	4.D.1 Evaluate own performance in the design and implementation of the spreadsheet-based business solution carried out in LO 3 making recommendations regarding future similar development projects including: a) design choices

		taken in LO.3 identifying possible areas for improvement and make modifications if required.	b) software and techniques used c) timeframes d) resources e) usability f) maintenance

Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit Designing and Implementing Spreadsheet Based Business Solutions - Content
1. Understand how spreadsheets can be used for data modelling.	**Scope** The teaching content will deal with how spreadsheet data modelling can be used to organise and structure data to facilitate analysis, decision-making, and visualisation. This will include the following functions: • Data cleaning and transformation • Filtering and Sorting • Time-Series Analysis • Scenario Analysis **Sufficiency (pass)** **Assessment Criteria:** 1.1. Describe what is meant by data modelling and how businesses can use it to inform decision making. Learners will evidence an understanding of data modelling as the representation of real-world entities and the relationships between them in a structured and organised format, and how data should be stored, accessed, and managed within a database or information system such as spreadsheet software. **Sufficiency (pass)** **Assessment Criteria:** 1.2. Describe the key functionality in spreadsheet software and how it may be used for data modelling. Learners will evidence an understanding of the use of: • Data cleaning and transformation - functions like TRIM, PROPER, LOWER, and UPPER can be used to clean and standardise text data. • Filtering and Sorting - SORT and FILTER functions help in sorting and filtering data based on specific criteria. • Time-Series Analysis - functions like YEAR, MONTH, DAY, and WEEKDAY can be used to extract components from date/time data. • Scenario Analysis - IF statements and data tables to perform scenario analysis by changing input values and observing the impact on outputs.
2. Be able to design a business spreadsheet solution.	**Scope** Content will address the development of a spreadsheet based solution to a given business scenario to allow calculations and graphical displays of data. **Sufficiency (pass)** **Assessment Criteria:** 2.1. Develop a design for a spreadsheet based solution for a given business scenario to include:

	a) calculations / totals b) graphical displays of the data Learners will evidence an understanding of spreadsheet design and implementation. **Sufficiency (merit)** **Assessment Criteria:** 2.M.1 Analyse the spreadsheet solution design in AC 2.1 making suggestions for improvement and make modifications if required. Learners will provide an analysis of the design provided in 2.1 to develop suggestions for further improvement and changing the design based on findings of evaluation.
3. Be able to develop business spreadsheet solutions.	**Scope** This will be taught within a business spreadsheet context and will address the incorporation of advanced graphics and functionality into spreadsheet design. This will include: • Mathematical and Statistical Analysis • Data Visualisation • Pivot Tables **Sufficiency (pass)** **Assessment Criteria:** 3.1. Develop a spreadsheet based solution for a given business scenario to include: a) sheet formatting / presentation b) use a range of formulae / functions c) graphical displays of business information Learners will evidence an understanding of the use: • Mathematical and Statistical Analysis - functions like SUM, AVERAGE, MAX, and MIN to perform mathematical operations. • Data Visualisation - charts and graphs using functions like CHART or directly from the data using the built-in chart creation tools. • Pivot Tables - allow summarisation and analysis of data dynamically using functions such as SUM, and COUNT **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Analyse the spreadsheet solution developed in AC 3.1. identifying how use of advanced spreadsheet features can enhance its effectiveness as a data modelling tool. Learners will provide an analysis of the spreadsheet solution provided in AC 3.1. and make suggestions for further improvement in particular identifying additional features requiring more advanced spreadsheet techniques from the following list: • Pivot tables and pivot charts • Conditional formatting • Removing duplicates • XLOOKUP • IFERROR

	• MATCH • COUNTBLANK • DAYS and NETWORKDAYS • RANK • SUMPRODUCT **Sufficiency (distinction)** **Assessment Criteria:** 3.D.1 Implement advanced spreadsheet features identified in AC 3.M.1 to enhance the spreadsheet solution's effectiveness as a data modelling tool. The learner will add additional functionality and features identified within the analysis to the spreadsheet through demonstration of advanced spreadsheet techniques.
4. Be able to plan and implement the testing of a spreadsheet-based business solution.	**Scope** Learners will be taught how to plan and perform the testing of spreadsheet solutions in a methodical and consistent manner. This will include: • Input Validation Testing • Formula and Calculation Testing • Error Handling Testing • Data Consistency Testing Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 4.1. Plan and implement the testing of the spreadsheet-based business solution developed in AC 3.1. documenting outcomes of tests carried out. Learners will evidence an understanding of the areas in which a spreadsheet can be tested. These will include the following: • Input Validation Testing – Validation of the input by testing the spreadsheet with various types of data, including normal inputs, boundary values, and extreme cases. • Formula and Calculation Testing - Verification that all formulas and calculations produce the expected results. • Error Handling Testing - Test how the spreadsheet handles errors, such as division by zero, circular references, or invalid inputs. • Data Consistency Testing - Check for data consistency across different parts of the spreadsheet. Verify that data entered in one section correctly updates related sections. **Sufficiency (merit)** **Assessment Criteria:** 4.M.1 Use outcomes of testing carried out in AC 4.1 to inform the evaluation of the effectiveness of the design spreadsheet solution developed and approaches taken in AC 3.1 identifying possible areas for improvement and make modifications if required.

	Learners will provide an evaluation of the design provided in 3.1. using tests developed and undertaken in 4.1. to provide suggestions for further improvement. **Sufficiency (distinction)** **Assessment Criteria:** 4.D.1 Evaluate own performance in the design and implementation of the spreadsheet based business solution carried out in AC 3.1 making recommendations regarding future similar development projects including: a) design choices b) software and techniques used c) timeframes d) resources e) usability f) maintenance

Title	2D Games Development
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG576
Unit Reference No	L/651/0433
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to understand how to design, develop and test computer games.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Understand different game types, platforms and developer tools.	1.1. Explain different game types, platforms and developer tools.		
2. Be able to develop a 2D games concept and storyboard.	2.1. Summarise the key factors to be considered in designing a successful game. 2.2. Develop a 2D computer game concept including: a) main idea or concept b) genre c) story and characters d) core game mechanics e) gameplay f) level and world design g) look and feel 2.3. Develop a storyboard for the 2D computer game design concept developed in AC 2.2.	2.M.1 Analyse how the game storyboarded in AC 2.3 addresses factors identified in AC 2.1 and the 2D computer game design concept developed in AC 2.2. identifying possible improvements and making changes as required.	2.D.1 Present the 2D computer game design concept developed in AC 2.2 and the game design story board evaluated and modified in AC 1.M.2.

3. Be able to develop a 2D computer game.	3.1. Develop a basic 2D computer game for a given game concept using given developer tools for the design developed in LO2.	3.M.1 Use advanced options and techniques to enhance the user experience of the 2D computer game developed in AC 3.1 including: a) incorporation of more engaging sound b) improved game play c) intuitive game control	
4. Be able to plan and implement the testing of a 2D computer game.	4.1. Plan and implement the testing of the 2D computer game developed in LO 3 documenting outcomes of tests carried out.	4.M.1 Use outcomes of testing carried out in AC 4.1 to inform the evaluation of the effectiveness of the 2D computer game developed and approaches taken in AC 3.1. identifying possible areas for improvement and make modifications if required.	4.D.1 Evaluate own performance in the design, development and testing of the 2D computer game developed in LO 3 making recommendations regarding future similar development projects including: a) design choices b) software and techniques used c) timeframes d) resources e) usability f) maintenance

Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit 2D Games Development - Content
1. Understand different game types, platforms and developer tools.	**Scope** Content will address the following game types, platforms, and developer tools. Game types: • Platformers • Puzzle Games • Role-Playing Games • Fighting Games • Simulation Games • Racing Games • Strategy Games Platforms: • PC • Console • Mobile devices • Handheld devices Developer tools: • Unity • Gamemaker studio • Construct • Pygame **Sufficiency (pass)** **Assessment Criteria:** 1.1. Explain different game types, platforms and developer tools. Learner will evidence the following understanding: Game types: • Platformers - involve characters navigating through levels by jumping between platforms eg Super Mario Bros. • Puzzle Games - require logic and critical thinking eg. Tetris • Role-Playing Games - players assume the roles of characters in a fictional world eg Final Fantasy VI • Fighting Games - battles between characters with unique moves and abilities eg Street Fighter II. • Simulation Games - simulate real-world activities or scenarios eg. The Sims. • Racing Games - involve players competing in races against AI or other players eg. Mario Kart. • Strategy Games - players plan and make tactical decisions to achieve specific objectives eg. Age of Empires. Platforms: • PC – User can download games from digital distribution platforms like Steam, GOG, or play browser-based 2D games • Console – eg PlayStation, Xbox, and Nintendo Switch • Mobile devices - Android and iOS platforms available through app stores

	• Handheld devices - such as the Nintendo DS or PlayStation Portable (PSP) Developer tools: • Unity - provides a robust 2D framework, a visual editor • Gamemaker studio - a user-friendly game development platform that caters to both beginners and experienced developers • Construct - a visual scripting game development engine that requires no coding • Pygame - provides functionalities for handling graphics, sound, and user input, making it a popular choice for beginners
2. Be able to develop a 2D games concept and storyboard.	**Scope** Teaching content will cover the key considerations in the development of a 2D games concept which will feed in to storyboard creation. This will include: • Game Concept and Theme • Narrative Structure • Gameplay Elements • Level Design • Character Design and Development • Sound and Music • Feedback Mechanisms Learners will be taught evaluation and presentation techniques. **Sufficiency (pass)** **Assessment Criteria:** 2.1. Summarise the key factors to be considered in designing a successful game. Learners will demonstrate understanding of the following factors to be considered in design: • Game Concept and Theme - clearly define the overall concept, genre and theme of the game • Narrative Structure - outline the main storyline, subplots, and character arcs • Gameplay Elements - identify key gameplay elements and how they integrate into the story • Level Design - outline the different levels or stages of the game • Character Design and Development – provision of detailed character designs, including visual references for main and supporting characters • Sound and Music – consideration of the role of sound and music in enhancing the game experience • Feedback Mechanisms - illustrate how the game provides feedback to the player, such as visual cues, audio signals, or on-screen prompts **Sufficiency (pass)** **Assessment Criteria:** 2.2. Develop a 2D computer game concept including: a) main idea or concept b) genre c) story and characters d) core game mechanics e) gameplay

	f) level and world design g) look and feel The learner will implement understanding developed in AC 2.1 to create an original gaming concept. **Sufficiency (pass)** **Assessment Criteria:** 2.3. Develop a storyboard for the 2D computer game design concept developed in AC 2.2. The learner will produce a storyboard to explain and illustrate the concept developed in AC 2.2. **Sufficiency (merit)** **Assessment Criteria:** 2.M.1 Analyse how the game storyboarded in AC 2.3 addresses factors identified in AC 2.1 and the 2D computer game design concept developed in AC 2.2. identifying possible improvements and making changes as required The learner will provide an analysis of the storyboard to identify proposals for improvement. **Sufficiency (distinction)** **Assessment Criteria:** 2.D.1 Present the 2D computer game design concept and storyboard developed in AC 2.2 and the game design story board evaluated and modified in AC 1.M.1. The learner will prepare and deliver a presentation of the storyboard and its development including the evaluation.
3. Be able to develop a 2D computer game.	**Scope** Teaching content will cover the use of basic game development tools. The tool to be used will be selected from the list covered in AC 1.1. **Sufficiency (pass)** **Assessment Criteria:** 3.1. Develop a basic 2D computer game for a given game concept using given developer tools for the design developed in LO2. The learner will develop the game designed in AC 2.2. using a specified development tool considered in AC 1.1. **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Use advanced options and techniques to enhance the user experience of the 2D computer game developed in AC 3.1 including: a) incorporation of more engaging sound b) improved game play c) intuitive game control The learner will identify and use additional and more advanced options and technique to improve the final game product with a focus on sound, game play and game control.

4. Be able to plan and implement the testing of a 2D computer game.	**Scope** Learners will be taught how to plan and perform testing in a methodical and consistent manner in order to refine and improve a 2D computer game. This will include testing of: • Game mechanics • Objectives • User interface and input • Visual elements • Interactive elements • Sound • Game progression and performance Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 4.1. Plan and implement the testing of the 2D computer game developed in AC 3.1 documenting outcomes of tests carried out. Learners will evidence implementation of testing of the game developed in AC 3.1. **Sufficiency (merit)** **Assessment Criteria:** 4.M.1 Use outcomes of testing carried out in AC 4.1 to inform the evaluation of the effectiveness of the 2D computer game developed and approaches taken in AC 3.1, identifying possible areas for improvement, and make modifications if required. The learner will evidence the capacity to translate testing outcomes into an evaluation which will provide proposals for improvement which can then be implemented. **Sufficiency (distinction)** **Assessment Criteria:** 4.D.1 Evaluate own performance in the design, development and testing of the 2D computer game developed in AC 3.1 making recommendations regarding future similar development projects including: a) design choices b) software and techniques used c) timeframes d) resources e) usability f) maintenance The learner will provide an overall evaluation of their performance in this unit to include recommendations for future projects.

Title	Website Development
Level	Two
Credit Value	8
Guided Learning Hours (GLH)	60
OCN NI Unit Code	CBG577
Unit Reference No	T/651/0436
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to understand how to design and develop websites.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Understand how and why websites are used by businesses.	1.1. Explain how and why websites are used by businesses.	1.M.1 Analyse recent trends in website development.	
2. Be able to design a website.	2.1. Describe the elements of good website design for mobile and static devices. 2.2. Describe the copyright issues involved in website development. 2.3. Develop a website design solution for given business requirements including: a) engaging target audience b) having a professional look and feel c) having appropriate navigation d) consisting of at least six linked pages e) incorporating graphics, video, audio and external links f) incorporating responsive design	2.M.1 Analyse the effectiveness of the website design developed in AC 2.3 in addressing the elements of good website design identified in AC 2.1 and business requirements identified in AC 2.3.	

3. Be able to develop a website.	3.1. Develop a website in line with design developed in AC 2.3. using appropriate computer code.	3.M.1 Develop user interactivity within appropriate elements of website developed in AC 3.1.	3.D.1 Describe what is meant by Search Engine Optimization (SEO) and how a website can incorporate elements to enhance this.
4. Be able to test a website.	4.1. Test the website developed in AC 3.1.	4.M.1 Analyse the effectiveness of the website tested in AC 4.1 against the business requirements identified in AC 2.3.	4.D.1 Use the evaluation carried out in AC 4.M.1 identifying areas for improvement and modifying website as required. 4.D.2 Evaluate own performance including: a) software selection b) time management c) project design and implementation identifying areas for improvement in future website development projects

Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit Website Development - Content
1. Understand how and why websites are used by businesses.	**Scope** Content will address the purpose and value of a website in furthering the aims of a business. This will include the following: • Online presence • E-commerce and Online Sales • Customer Engagement • Data Collection and Analytics Content will cover evaluation of recent website trends. **Sufficiency (pass)** **Assessment Criteria:** 1.1. Explain how and why websites are used by businesses. The learner will demonstrate understanding of the value of websites to businesses. This will include the following: • Online presence - accessible to a global audience and market. It acts as a digital storefront, providing information about the company's branding, products, services, and values • E-commerce and Online Sales - to allow customers to browse, select, and purchase products or services directly • Customer Engagement – facilitation of communication with customers. • Data Collection and Analytics – collection of data on user behaviour and engagement to generate leads **Sufficiency (merit)** **Assessment Criteria:** 1.M.1 Analyse recent trends in website development. The learner will be able to analyse trends in website development in terms of their application within a general business context.
2. Be able to design a website.	**Scope** Teaching content will address design principles for website design that will ensure a positive user experience for mobile and static devices. It will also consider copyright issues relevant to website development. Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 2.1. Describe the elements of good website design for mobile and static devices. Learners will describe the following elements of website design for mobile devices: • Responsive Design - website layout adapts to different screen sizes • Mobile-Friendly Navigation – ensure that the website will operate on a mobile device

	• Optimized Content - Prioritise and streamline content for mobile users - use concise and legible fonts to enhance readability on smaller screens • Fast Loading Times - Optimize images and other media for quick loading Learners will describe the following elements of website design for static devices: • Optimized Layout - layout that takes advantage of the larger screen • Navigation Clarity - clear and intuitive navigation menu • Whitespace and Readability - Use whitespace to prevent a cluttered look and readable font sizes and styles for desktop screens • High-Resolution Images - high-quality images that take advantage of larger display resolutions **Sufficiency (pass)** **Assessment Criteria:** 2.2. Describe the copyright issues involved in website development. Learner will describe the following issues: • Copyright infringement issues • Licenses and permissions – to include software licenses, codes and scripts • Adaptation of existing websites • Domain name – unique and not confusing with existing brands. • Fair Use Considerations **Sufficiency (pass)** **Assessment Criteria:** 2.3. Develop a website design solution for given business requirements including: a) engaging target audience b) having a professional look and feel c) having appropriate navigation d) consisting of at least six linked pages e) incorporating graphics, video, audio and external links f) incorporating responsive design **Sufficiency (merit)** **Assessment Criteria:** 2.M.1 Analyse the effectiveness of the website design developed in AC 2.3 in addressing the elements of good website design identified in AC 2.1 and business requirements identified in AC 2.3. Learner will provide justification for the design choices made in AC 2.3.
3. Be able to develop a website.	**Scope** Teaching content will ensure the learner is able to develop a simple website using HTML and CSS. This will also address interactive website content and search engine optimisation.

	Sufficiency (pass) **Assessment Criteria:** 3.1. Develop a website in line with design developed in AC 2.3. using appropriate computer code. The learner will develop a website in line with the design produced in AC 2.3. **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Develop user interactivity with appropriate elements of website developed in AC 3.1. The learner will include interactive elements to the website developed. **Sufficiency (distinction)** **Assessment Criteria:** 3.D.1 Describe what is meant by Search Engine Optimization (SEO) and how a website can incorporate elements to enhance this. The learner should include a detailed answer that references the following: • Keyword research and targeting • Quality engaging content • Title tags • Meta descriptions • Header tags • URL structure
4. Be able to test a website.	**Scope** Learners will be taught to perform website testing in a methodical and consistent manner. This will include: • Functionality – testing to see that the website operates as intended • Cross-Browser Compatibility • Responsive Design • Performance Testing Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 4.1. Test the website developed in AC 3.1. Learner will test the website developed in AC 3.1. against the following criteria: • Functionality – testing to see that the website operates as intended • Cross-Browser Compatibility • Responsive Design – operation of different devices • Performance Testing – to include loading speeds

	Sufficiency (merit) **Assessment Criteria:** 4.M.1 Analyse the effectiveness of the website tested in AC 4.1 against the business requirements identified in AC 2.3. The learner will analyse the website against specified business requirements. **Sufficiency (distinction)** **Assessment Criteria:** 4.D.1 Use the evaluation carried out in AC 4.M.1 identifying areas for improvement and modifying website as required. The learner will develop areas for improvement based on evaluation of the website function and implement as appropriate. **Sufficiency (distinction)** **Assessment Criteria:** 4.D.2 Evaluate own performance including: a) software selection b) time management c) project design and implementation d) identifying areas for improvement in future website development projects The learner will provide an evaluation of their own performance in development of the website.

Title	Understanding Emerging Technology
Level	Two
Credit Value	6
Guided Learning Hours (GLH)	30
OCN NI Unit Code	CBG578
Unit Reference No	A/651/0447
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to understand emerging technologies, their impact and how they may be adopted by businesses.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Be aware of emerging technology.	1.1. Explain two different new emerging technologies.		
2. Understand how businesses adopt emerging technologies.	2.1. Explain the main factors to be considered by a business when adopting an emerging technology to provide a business solution.	2.M.1 Design a business solution using an emerging technology for a given business.	2.D.1 Evaluate the design developed in AC 2.M.1. identifying possible areas for improvement and making changes to design as required.
3. Understand the impact of adopting an emerging technology.	3.1. Assess the impact of emerging technology on society including: a) employment and skills b) cultural and social issues c) economic growth 3.2. Assess the impact of emerging technology on businesses including: a) employment, skills and career opportunities b) business structures and ways of working c) productivity and competitiveness	3.M.1 Analyse the impact of a given emerging technology on a given industry sector in terms of potential job role opportunities and associated skills requirements.	3.D.1 Develop a plan for how an individual can develop the skills associated with one of job role opportunities identified in AC 3.M.1.

Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion

Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit Understanding Emerging Technology - Content
1. Be aware of emerging technology.	**Scope** Teaching content will overview a range of emerging technologies. While this by its nature is dynamic and therefore will require update, the following technologies may be included: • Artificial Intelligence (AI) and Machine Learning (ML): AI and ML are being increasingly integrated into various industries for tasks like data analysis, automation, and decision-making. • 5G Technology: The fifth generation of wireless technology, 5G, promises faster internet speeds, lower latency, and increased connectivity, enabling advancements in areas like smart cities, IoT devices, and augmented reality. • Blockchain: Originally developed for cryptocurrencies like Bitcoin, blockchain is finding applications in various sectors, such as supply chain management, finance, and healthcare. • Internet of Things (IoT): IoT involves connecting everyday devices to the internet, enabling them to send and receive data. • Quantum Computing: Quantum computers leverage the principles of quantum mechanics to perform complex computations at speeds that traditional computers cannot achieve. • Augmented Reality (AR) and Virtual Reality (VR): AR and VR technologies are used in gaming, education, healthcare, and training. • Biotechnology and CRISPR-Cas9: Advances in biotechnology, including the revolutionary CRISPR-Cas9 gene-editing technology, have significant implications for personalized medicine, agriculture, and the treatment of genetic disorders. **Sufficiency (pass)** **Assessment Criteria:** 1.1. Explain two different new emerging technologies. Learners will evidence an understanding of two different emerging technologies.
2. Understand how businesses adopt emerging technologies.	**Scope** Teaching content will explore the principal considerations that businesses must undertake when making a decision concerning the adoption of an emerging technology. Factors to be considered should be as follows: • Strategic Alignment: Ensure that the adoption of emerging technologies aligns with the overall business strategy and goals. • Cost-Benefit Analysis: Conduct a thorough cost-benefit analysis to understand the return on investment (ROI) associated with implementing the technology. • Scalability: Evaluate whether the technology can scale with the growth of the business. • Integration with Existing Systems: Assess how easily the new technology can integrate with existing systems and processes within the organisation. • Security and Compliance: Prioritise security considerations and compliance with industry regulations.

	• Skills and Training: Evaluate the skills required for implementing and maintaining the technology. • Capacity to change: Communication, training, and support mechanisms should be available to address any concerns and facilitate a smooth transition. • Vendor Reliability: Assess the reliability and reputation of the technology vendor. • Regulatory Considerations: Establish that the technology complies with any industry-specific regulations that may impact the adoption of certain technologies. Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 2.1. Explain the main factors to be considered by a business when adopting an emerging technology to provide a business solution. Learners will evidence an understanding of the main factors to be considered by a non-specific business when making a decision whether or not to adopt an emerging technology. **Sufficiency (merit)** **Assessment Criteria:** 2.M.1 Design a business solution using an emerging technology for a given business. Learners will produce a design for a business solution for a given business. **Sufficiency (distinction)** **Assessment Criteria:** 2.D.1 Evaluate the design developed in AC 2.M.1. identifying possible areas for improvement and making changes to design as required. The learner will provide an evaluation of the initial design developed in AC 2.M.1 identifying and making improvement to initial design.
3. Understand the impact of adopting an emerging technology.	**Scope** Teaching content will address the impact of emerging technology on society and business. Impacts on society may include: • Improved quality of life • Enhanced connectivity • Education transformation • Increased efficiency and convenience • Healthcare advancements • Environmental sustainability • Privacy concerns • Ethical issues • Job losses and societal inequality

Impacts on business and economy may include:

- Increased productivity, innovation and agility
- Global reach and competition
- Data-driven decision making
- Customer engagement
- Cost reduction
- Supply chain optimisation
- Security and data privacy
- Business obsolescence and transformation
- High investment costs
- Skills gaps and job displacement
- Dependence on technology suppliers

Career planning around emerging technologies.

Sufficiency (pass)

Assessment Criteria:

3.1. Assess the impact of emerging technology on society including:

a) employment and skills
b) cultural and social issues
c) economic growth

Learners will examine the impact of emerging technology on employment and skills, cultural and social issues and economic growth in relation to four of the societal impacts identified above.

Sufficiency (pass)

Assessment Criteria:

3.2. Assess the impact of emerging technology on businesses including:

a) employment, skills and career opportunities
b) business structures and ways of working
c) productivity and competitiveness

Learners will examine the impact of emerging technology on employment, skills and career opportunities, business structures and ways of working in relation to four of the business impacts identified above.

Sufficiency (merit)

Assessment Criteria:

3.M.1 Analyse the impact of a given emerging technology on a given industry sector in terms of potential job role opportunities and associated skills requirements.

The learner will be able to provide evidence of research and analysis into the potential for the adoption of emerging technology in a given sector with a particular reference to new skill requirements for roles specifically supporting new technologies.

Sufficiency (distinction)

Assessment Criteria:

3.D.1 Develop a plan of how an individual can develop the skills associated with one of job role opportunities identified in AC 3.M.1.

Learner will produce a plan to support skills development for a role supporting an emerging technology as identified in AC 3.M.1.

Title	Graphic Design
Level	Two
Credit Value	6
Guided Learning Hours (GLH)	30
OCN NI Unit Code	CBG579
Unit Reference No	D/651/0448
Learn Direct Code	CN0

Unit purpose and aim(s): This unit will enable the learner to develop practical skills in graphic design.

Learning Outcomes	Assessment Criteria = Pass	Assessment Criteria = Merit	Assessment Criteria = Distinction
1. Know the main computer graphics software packages.	1.1. Describe the features of the main graphics software packages.	1.M.1 Analyse two graphics software packages including the advantages and disadvantages of each.	
2. Be able to design computer graphics.	2.1. Design a computer graphics solution for given client requirements to be used in one of the following types of applications: a) computer game or animation b) website c) marketing materials	2.M.1 Justify the design decisions for the computer graphics design solution created in AC 2.1.	2.D.1 Evaluate the computer graphics design solution created in AC 2.1 identifying possible areas for improvement and making modifications to design as required.
3. Be able to use computer graphics software to produce computer graphics.	3.1. Use computer graphics software to produce computer graphics based on the design created in AC 2.1. and use the computer graphics within the type of application identified in the client brief in AC 2.1.	3.M.1 Use advanced options and techniques to enhance the computer graphics produced in AC 3.1	3.D.1 Evaluate the computer graphics produced against client brief and own performance including: a) software selection b) time management c) project design and implementation identifying areas for improvement in future computer graphics development projects.

Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	**Definition**	**Possible Content**
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary
E-assessment	The use of information technology to assess learners' work	Electronic portfolio E-tests

Learning Outcome	Unit Graphic Design - Content
1. Know the main computer graphics software packages.	**Scope** Teaching content will overview the main features and functionality of commonly used and accessible graphics software packages to include: • Adobe Creative Cloud Suite • CorelDRAW • GIMP (GNU Image Manipulation Program) • Blender • Affinity Suite **Sufficiency (pass)** **Assessment Criteria:** 1.1. Describe the features of the main graphics software packages. The learner will be able to describe the main features of graphics software packages which may include packages from the following: • Adobe Creative Cloud Suite • CorelDRAW • GIMP (GNU Image Manipulation Program) • Blender • Affinity Suite **Sufficiency (merit)** **Assessment Criteria:** 1.M.1 Analyse two graphics software packages including the advantages and disadvantages of each. The learner will provide an analysis of two graphic software packages.
2. Be able to design computer graphics.	**Scope** Teaching content will cover the design processes required to produce a graphic design for use in a computer game or animation, a website, or for marketing purposes. The process taught will include: • Understanding of client requirements • Research and conceptualisation • Sketching and wireframing • For games, consideration of the interface design, character design, environment design, etc • For websites, design elements such as logos, banners, buttons, and other visual assets • For marketing materials, design brochures, posters, social media graphics, etc Learners will be taught evaluation techniques.

	Sufficiency (pass) **Assessment Criteria:** 2.1. Develop a computer graphics design solution for given client requirements for a design to be used in one of the following types of applications: a) computer game or animation b) website c) marketing materials The learner will develop a computer graphic design solution which is suitable for use in a computer game or animation, website, or for marketing. **Sufficiency (merit)** **Assessment Criteria:** 2.M.1 Justify the design decisions for the computer graphics design solution developed in AC 2.1. The learner will be able to provide justification for the design decisions provided in AC 2.1. **Sufficiency (distinction)** **Assessment Criteria:** 2.D.1 Evaluate the computer graphics design solution developed in AC 2.1 identifying possible areas for improvement and making modifications to design as required. The learner will provide an evaluation of their design decisions to identify areas for improvement and will implement as required.
3. Be able to use computer graphics software to produce computer graphics.	**Scope** Teaching content will cover the use of a selected graphics design package to the extent that the learner is able to produce a design that will meet a client brief. Learners will be taught evaluation techniques. **Sufficiency (pass)** **Assessment Criteria:** 3.1. Use computer graphics software to produce computer graphics based on the design created in AC 2.1. and use the computer graphics within the type of application identified in the client brief in AC 2.1. Learner will demonstrate the skills and techniques to produce a computer graphics that will satisfy the client brief produced in AC 2.1. and use the computer graphics within a given application. **Sufficiency (merit)** **Assessment Criteria:** 3.M.1 Use advanced options and techniques to enhance the computer graphics produced in AC 3.1. The learner will demonstrate the use of additional advanced computer graphic software options and techniques to add value to and enhance the original computer graphics.

	Sufficiency (distinction) **Assessment Criteria:** 3.D.1 Evaluate the computer graphics produced against client brief and own performance including: a) software selection b) time management c) project design and implementation identifying areas for improvement in future computer graphics development projects. The learner will both evaluate the computer graphics produced and its functionality within the given application and their own performance in developing the computer graphics.

11. Quality Assurance of Centre Performance

11.1 Internal Assessment

When delivering and assessing this qualification, Centres must align with stakeholders' expectations and address learners' needs by implementing a practical and applied programme. Centres have the flexibility to customise programmes to meet local requirements and establish connections with local employers and the broader vocational sector.

The Assessor should work with the Internal Verifier to ensure that the assessment is planned in line with OCN NI requirements. Assessment Plans must be developed and approved by the Internal Verifier prior to the delivery of the qualification.

All units within these qualifications must undergo internal assessment. Learners must provide evidence that they have appropriately met all assessment criteria required for that grade.

The assessment format for all units involves a task conducted after the delivery of the unit's content, or part of it, if multiple tasks are used. Tasks may exhibit in various forms, encompassing practical and written types. Please refer to 'OCN NI's Assessment Definitions Guide' for additional details.

A task constitutes a distinct activity completed independently by learners, separated from teaching, practice, exploration, and other activities guided by tutors. Tasks are assigned to learners with a specified start date, completion date, and explicit requirements for the evidence to be produced. Some tasks may include observed practical components and require diverse forms of evidence.

A valid assignment will enable a clear and formal assessment outcome, which meets the requirements of the assessment criteria. Assessment decisions are based on the specific assessment criteria given in each unit and set at each grade level. The way in which individual units are written provides a balance of assessment of understanding, practical skills and vocational attributes appropriate to the purpose of qualifications.

It is the Assessor's role to ensure that learners are appropriately prepared for assessment, this begins from induction onwards. Assessors should ensure that learners understand how assessment tasks are used to determine the award of credit, the importance of meeting assessment timelines, and that all learners work must be independently created, where source documents are used this should be appropriately referenced, learners should be aware of what would constitute plagiarism and the possible consequences.

When conducting the assessment, Assessors must ensure they do not provide direct input, instructions or specific feedback which may compromise the authenticity of the work submitted.

Once the Assessor has authenticated the learners work, they must transparently demonstrate the rationale behind their assessment decisions. Once a learner completes all assigned tasks for a unit, the Assessor will allocate a grade for the unit. Refer to the 'Unit Grading Matrix' for additional information on the grading process.

Once the Assessor has completed the assessment process for the task, the assessment decision is recorded formally, and feedback is provided to the learner. The feedback should show the learner the outcome of the assessment decision, how it was determined or where the criteria has been met, it may indicate to the learner why achievement of the assessment criteria has not been met. It must be clear to the learner that this Assessment outcome is subject to verification.

For further information on assessment practice, please see the 'OCN NI Centre Handbook'. Assessment Training is also available and can be booked through the OCN NI Website.

11.2 Internal Verification

The role of the Internal Verifier is to ensure appropriate internal quality assurance processes are carried out. The Internal Verifier must oversee that assessments are conducted in accordance with relevant OCN NI policies, regulations, and this specification.

The Internal Verifier must ensure assessments are fair, reliable, and uniform, thereby providing a consistent standard for all learners.

Internal Verifiers are required to provide constructive feedback to Assessors, identifying areas of strength and those that may require improvement. This feedback contributes to the ongoing professional development of Assessors.

Contributing to the standardisation of assessment practices within the Centre is an important function of this role. This entails aligning assessment methods, grading criteria, and decision-making processes to maintain fairness and equity.

Internal Verifiers will actively engage in the sampling and monitoring of assessments to ensure the consistency and accuracy of assessment decisions. This process helps identify trends, areas for improvement, and ensures the robustness of the overall assessment system.

For further information on internal verification practice, please see the 'OCN NI Centre Handbook'. Internal Verification Training is also available and can be booked through the OCN NI Website.

11.3 Documentation

For internal quality assurance processes to be effective, the internal assessment and internal verification team needs to keep effective records.

- The programme must have an assessment and internal verification plan. When producing a plan, they should consider:
    - the time required for training and standardisation activities
    - the time available to undertake teaching and carry out assessment,

- consider when learners may complete assessments and when quality assurance will take place
- the completion dates for different assessment tasks
- the date by which the assignment needs to be internally verified
- sampling strategies
- how to manage the assessment and verification of learners' work so that they can be given formal decisions promptly
- how resubmission opportunities can be scheduled.

The following documents are available from OCN NI and document templates can be found in the Centre Login section of the OCN NI website www.ocnni.org.uk:

- A1 – Learner Assessment Record per Learner
- A2 – Assessment Decision Form per Learner
- learner authentication declarations
- Records of any reasonable adjustments applied for and the outcome – please see 'OCN NI's Reasonable Adjustments and Special Consideration Policy' for further information
- M1 Internal Verification Sample Record
- M2 Feedback to Assessor
- Records of any complaints or appeals

11.4 External Quality Assurance

All OCN NI recognised centres are subject to External Quality Assurance. External quality assurance activities will be conducted to confirm continued compliance with the conditions of recognition, OCN NI terms and conditions and the requirements outlined within this qualification specification.

The External Quality Assurance is assigned by OCN NI. The External Quality Assurer will review the delivery and assessment of this qualification. This will include, but is not limited to, the review of a sample of assessment evidence and evidence of the internal verification of assessment and assessment decisions. This will form the basis of the External Quality Assurance report and will help OCN NI determine the Centres risk.

The role of the External Quality Assurer serves as an external overseer of assessment quality, working to uphold consistency, compliance, and continuous improvement within the assessment process. Their role is crucial in ensuring that assessments are valid, reliable, fair, and aligned with the required standards and regulations.

For further information on OCN NI Centre Assessments Standards Scrutiny (CASS) Strategy, please see the OCN NI Centre Handbook.

11.5 Standardisation

As a process, standardisation is designed to ensure consistency and promote good practice in understanding and the application of standards. Standardisation events:

- make qualified statements about the level of consistency in assessment across centres delivering a qualification
- make statements on the standard of evidence that is required to meet the assessment criteria for units in a qualification
- make recommendations on assessment practice
- produce advice and guidance for the assessment of units
- identify good practice in assessment and internal verification

Centres offering this qualification must carry out internal standardisation activities prior to the claim for certification.

Centres offering units of an OCN NI qualification must attend and contribute assessment materials and learner evidence for standardisation events if requested.

OCN NI will notify centres of the nature of sample evidence required for standardisation events (this will include assessment materials, learner evidence and relevant Assessor and Internal Verifier documentation). OCN NI will make standardisation summary reports available and correspond directly with centres regarding event outcomes.

12. Administration

12.1 Registration

A centre must register learners for this qualification within 90 days of commencement of the delivery of the programme.

For further information on learner registration please see the OCN NI Centre Handbook and the QuartzWeb Manual, available through the Centre Login section of the OCN NI website. Administration training is also available and can be booked through www.ocnni.org.uk.

12.2 Certification

Once all internal quality assurance activities have been successfully completed, the Centre can claim certification for the learner(s).

Certificates will be issued to centres within 20 working days from completion of a satisfactory external quality assurance activity, if appropriate, alternatively from the submission of an accurate and complete marksheet.

It is the responsibility of the centre to ensure that certificates received from OCN NI are held securely and distributed to learners promptly and securely.

For further information on the uploading of results please see the QuartzWeb Manual for guidance, administration training is also available and can be booked through OCN NI

12.3 Charges

OCN NI publishes all up-to-date qualification fees in its Fees and Invoicing Policy document. Further information can be found on the centre login area of the OCN NI website.

12.4 Equality, Fairness and Inclusion

OCN NI's are committed to ensuring all learners have an equal opportunity to access our qualifications and assessment, and that our qualifications are awarded in a way that is fair to every learner.

OCN NI is committed to making sure that:

- learners with a protected characteristic are not, when they are undertaking one of our qualifications, disadvantaged in comparison to learners who do not share that characteristic
- all learners achieve the recognition they deserve for undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers

For information on reasonable adjustments and special considerations please see the OCN NI Centre Handbook and Reasonable Adjustments and Special Considerations Policy held in the back office of the OCN NI website.

12.5 Retention of Evidence

OCN NI has published guidance for centres on the retention of evidence. Details are provided in the OCN NI Centre Handbook and can be accessed via the OCN NI website.

OCN NI Level 2 Diploma in Information Technology
Qualification Number: 610/3860/X

Operational start date: **07 March 2024**
Operational end date: **28 February 2029**
Certification end date: **28 February 2031**

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12.6 Appendix 1 - Definition of OCN NI's Assessment Verbs

The following verbs are working definitions of those used in OCN NI assessments with examples of how they can be applied and used in different but equally valid contexts.

Verb	Definition	Example
Describe	To paint a full picture of a concept, process or thing in words	Describe what is meant by IT security. The answer may refer to measures and practices used to protect information technology systems, data, and networks from unauthorised access, breaches, and cyber threats and importance of safeguarding sensitive data, maintaining operational integrity, and preventing costly disruptions or breaches caused by cyberattacks and should include measures and practices used to protect IT systems, data and networks.
Compare	Make a judgment regarding the contrast between (positive and/or negative) two or more from a range of given things or information against each other in line with given criteria.	Compare the features of two components such as a motherboard and processor for a small home office or business.
Explain	Make clear a given subject matter and/or give reasons for and/or the procedure in a given situation or regarding a given subject matter.	The explanation may include a detailed answer that references the following: • virtual machines, storage, and networking, allowing businesses to scale resources up or down as needed, reducing infrastructure costs • how cloud services are typically accessible on a self-service, on-demand basis, enabling rapid deployment of applications and services without the need for extensive hardware • options including the benefits of pay-as-you-go pricing models, allowing businesses to pay only for the resources they use

		• cloud services can be accessed from anywhere with an internet connection, enabling remote work, collaboration, and flexibility
Summarise	A brief account giving the main points.	**A brief summary of the main points which may include reference to the following:** • strong passwords: • Two-Factor Authentication (2FA) • regular software updates • safe browsing habits
Evaluate	An evaluation is normally detailed and provides a solution or conclusion and/or recommendation (perhaps for further exploration). An evaluation could include a comparative element and will ascertain the usefulness or contribution of each part to the whole.	The evaluation may include a detailed answer that references the positive and negative aspects for individuals and businesses and may include examples and evaluation of the following: • connection and communication • information and awareness • networking and career opportunities • creative expression • privacy concerns • addiction and time-wasting • filter bubbles and echo chambers • marketing and brand exposure • customer engagement • data insights • negative publicity • resource intensive • algorithm changes

Install and configure	Set up and customising of settings to optimise functionality and meet specific requirements	Install refers to setting up software or hardware, while configure involves customizing settings to optimize functionality and meet specific requirements. In a hardware context, examples may include the installation and configuration of the following: • additional memory • graphics cards • external storage device • printer and scanner • external storage device • network hub In a software context, examples may include the installation and configuration of the following: • operating systems • network software • application software • utility software • data management software • multi-media software
Perform/Carry out	Execute an activity or process showing complex skills and knowledge in more than one familiar area and /or contexts.	This will be a practical activity or process which demonstrates tests being carried out on a computer system and may include computer performance, basic network connectivity and basic computer security.
Use/Test	Operate a system or process showing skills and knowledge in more than one area and /or contexts and generally carried out on at least three occasions.	This will be a practical activity demonstrating the operation of a computer system. It may include the interpretation of results following testing and also recommendations for improvements to the computer system.
Implement	Carry out or set up an activity showing complex skills and knowledge in more than one familiar and unfamiliar area and/or contexts.	This will be a practical activity demonstrating how to implement changes to make measurable improvements to the computer system on more than one occasion in both familiar and non-familiar contexts.

Design/Plan/Create/ Produce	Devise a solution and/or produce a thing or information to meet a given complex set of criteria.	This will include the design of a computer solution in response to client requirements and may include a range of the following features: • working with numeric and string data types • numeric (working with different number formats, e.g., integer, float, double) • string, character • variables, constants, and Boolean and arithmetic operators • input, output, and assignment statements • use of simple selection statements • problem statement • user needs • purpose • inputs • processes • outputs • storyboards • wireframes • pseudocode
Justify/Present	Present an argument for a particular action or choice. Will usually imply some form of assessment or analysis and may be linked with one or other action.	The argument provided should justify and include reasons behind the design choices in relation to the client requirements.
Illustrate	Show a process or activity or portray information in graphic or other forms.	The answer will provide information highlighting the features of good software design which may include the following: • modularity • simplicity • flexibility • efficiency • maintainability

		• user-centred
Research	Identifying and collecting data or information about a subject and presenting it in a structured form. Research may be combined with other related verbs such as analyse and evaluate.	Using the client requirements and brief the answer will include research on how to address common IT problems which may be typically encountered in industry for example: • a networked office environment involving the design and/or installation and maintenance of an IT new or existing IT system • how to produce detailed possible computer solutions to the IT problems above
Develop	Devise a solution and/or strategy to meet a given set of criteria.	Develop an implementation report which details how to create a testing plan for a computer solution.
Outline	To give general idea and overview without going into detail.	Outline the main types of cyber security with a short description of each: • Network Security: Protects data during transmission across networks • Endpoint Security: Secures individual devices from cyber threats • Cloud Security: Safeguards data and applications in cloud computing environments • Application Security: Guards software from vulnerabilities and unauthorized access • Identity and Access Management (IAM): Manages user permissions and authentication • Data Security: Ensures confidentiality and integrity of sensitive information

Apply	Apply rules, procedures and/or conventions in regard to an activity showing complex skills and knowledge in more than one familiar and unfamiliar area and /or contexts.	Apply appropriate protection measures, these include applying the following to IT systems: • Access control: ➢ using strong passwords ➢ implementing multi-factor authentication • Ensuring antivirus software is effective: ➢ installing reliable antivirus software ➢ keeping virus definitions up to date • Conducting patch management: ➢ regularly updating operating systems and software ➢ applying security patches promptly • Performing backup and recovery activities: ➢ regularly backing up critical data ➢ testing and verifying backup restoration
Select	Choose in preference to others	Select appropriate network hardware and software in line with design developed. This will involve assessing the features, functions, cost and performance of a range to networking hardware and software and determining which will best suit the given design.
Identify	To select and list appropriate items from information that you have been given or collected.	Identify network testing tools and tests that may be used to check performance of networking systems. The answer will comprise a list of tools and tests similar to the following: • Ping • Traceroute/Tracert • Wireshark • Nmap • Netstat • Iperf