Level 4 Cyber Security Technologist Apprenticeship (9660-12)

October 2018 Version 1

End-Point Assessment Pack

For End-Point Assessment Customers

Version and date	Change detail	Section
V1 October 2018	Document created	

Contents

1 Introduction

About this apprenticeship occupation

This EPA pack has been designed to assess all requirements as stipulated in the Cyber Security Technologist assessment plan version ST0124/AP02.

The primary role of a Cyber Security Technologist is to apply an understanding of cyber threats, hazards, risks, controls, measures and mitigations to protect organisations systems and people. Those focused on the technical side work on areas such as security design & architecture, security testing, investigations and response.

Those focussed on the risk analysis side focus on areas such as operations, risk, governance & compliance. Whether focussed on the technical or risk analyse side, all people in this occupation work to achieve required security outcomes in a legal and regulatory context in all parts of the economy. They develop and apply practical knowledge of information security to deliver solutions that fulfil an organisation's requirements

What is in this document
- The occupational standard
- The occupational brief
- Timeline for end-point assessment
- End-point assessment guidance and guidance on grading

End-point assessments

The focus of the end-point assessment is for the apprentice to fully demonstrate the values, knowledge, skills and behaviours set out in the apprenticeship standard and to be able to demonstrate this level of professional competence in authentic workplace contexts.

End-point assessments are formal summative assessments that conclude an apprenticeship programme. Each apprenticeship will be assessed in a number of ways to provide a clear indication of the apprentice's knowledge and skills. For this apprenticeship the following assessment methods need to be achieved:
- Employer reference
- Show case portfolio
- Synoptic project
- Independent End-Point Assessor (IEPA) interview.

Grading

This apprenticeship is graded Pass, Merit, Distinction. End-point assessments will be assessed and graded by City & Guilds independent end-point assessors, more information about how each assessment is graded and how the overall apprenticeship grade is determined can be found in later sections of this document.

Entry requirements for end-point assessment

To be eligible for end-point assessment the apprentice must have successfully achieved the following:
- Typically 24 – 30 months
- Apprentices will also have achieved Level 2 Mathematics and Level 2 English qualifications (or relevant equivalent) either during or before their apprenticeship.

Gateway – prior to end-point assessment

When all on-programme content has been completed, the employer and/or training provider are required to sign-off the apprentice as being ready to undertake the end-point assessment. In order to do this, they will be required to submit a **City & Guilds End-Point Assessment Gateway Declaration form**. This confirms that the apprentice has acquired the required knowledge, skills and behaviours, along with any mandatory qualifications. Each occupation has a specific Gateway Declaration form.

Completed Gateway Declaration forms are submitted to City & Guilds as part of the booking process and are checked by the End-point assessment team, prior to the allocation of an IEPA to undertake the assessments.

Remote Assessment

Remote assessment is live assessment that is supported by technology where the independent end-point assessor and the apprentice are not in the same physical location when the assessment takes place

The following assessments can be conducted remotely
- Synoptic projects (where appropriate)
- Independent End-point Assessor (IEPA) interview.

2 Apprenticeship Occupational Standard – Core

Ref	**Technical Competencies and Technical Knowledge and Understanding - CORE**
	Competency Standard
Core Technical Competency 01	Threats, hazards, risks and intelligence • Discover (through a mix of research and practical exploration) vulnerabilities in a system. • Analyse and evaluate security threats and hazards to a system or service or processes. Be aware of and demonstrate use of relevant external sources of threat intelligence or advice (e.g. CERT UK). Combine different sources to create an enriched view. • Research and investigate some common attack techniques and recommend how to defend against them. Be aware of and demonstrate use of relevant external sources of vulnerabilities (e.g. OWASP). • Undertake a security risk assessment for a simple system without direct supervision and propose basic remediation advice in the context of the employer.
Core Technical Competency 02	Developing and using a security case • Source and analyse a security case (e.g. a Common Criteria Protection Profile for a security component) and describe what threats, vulnerability or risks are mitigated and identify any residual areas of concern. • Develop a simple security case without supervision. (A security case should describe the security objectives, threats, and for every identified attack technique identify mitigation or security controls that could include technical, implementation, policy or process).
Core Technical Competency 03	Organisational context • Identify and follow organisational policies and standards for information and cyber security. • Operate according to service level agreements or employer defined performance targets. Future Trends. • Investigate different views of the future (using more than one external source) and trends in a relevant technology area and describe what this might mean for your business, with supporting reasoning.

	Technical Competencies and Technical Knowledge and Understanding - CORE
Core Technical Knowledge and Understanding 01	Understands the basics of cyber security including: • Why cyber security matters – the importance to business and society. • Basic theory – concepts such as security, identity, confidentiality, integrity, availability, threat, vulnerability, risk and hazard. Also how these relate to each other and lead to risk and harm. • Security assurance – concepts (can explain what assurance is for in security, and 'trustworthy' versus 'trusted') and how assurance may be achieved in practice (can explain what penetration testing is and how it contributes to assurance; and extrinsic assurance methods). • How to build a security case – deriving security objectives with reasoned justification in a representative business scenario. • Cyber security concepts applied to ICT infrastructure – can describe the fundamental building blocks and typical architectures and identify some common vulnerabilities in networks and systems. • Attack techniques and sources of threat – can describe the main types of common attack techniques; also the role of human behaviour. Explain how attack techniques combine with motive and opportunity to become a threat. • Cyber defence – describe ways to defend against attack techniques. • Relevant laws and ethics – describe security standards, regulations and their consequences across at least two sectors; the role of criminal and other law; key relevant features of UK and international law. • The existing threat landscape – can describe and know how to apply relevant techniques for horizon scanning including use of recognised sources of threat intelligence. • Threat trends – can describe the significance of identified trends in cyber security and understand the value and risk of this analysis.
Underpinning Skills, Attitudes and Behaviours 01	Logical and creative thinking skills.
Underpinning Skills, Attitudes and Behaviours 02	Analytical and problem solving skills.

	Technical Competencies and Technical Knowledge and Understanding - CORE
Underpinning Skills, Attitudes and Behaviours 03	Ability to work independently and to take responsibility.
Underpinning Skills, Attitudes and Behaviours 04	Can use own initiative.
Underpinning Skills, Attitudes and Behaviours 05	A thorough and organised approach.
Underpinning Skills, Attitudes and Behaviours 06	Ability to work with a range of internal and external people.
Underpinning Skills, Attitudes and Behaviours 07	Ability to communicate effectively in a variety of situations.
Underpinning Skills, Attitudes and Behaviours 08	Maintain productive, professional and secure working environment.

3 Apprenticeship Occupational Standard – Option 1: Technologist

Ref	Competency Standard
Technical Competencies and Technical Knowledge and Understanding – Option 1: Technologist	
Technical Competency 01 - Technologist	Design build & test a network ("Build a network") • Design, build, test and troubleshoot a network incorporating more than one subnet with static and dynamic routes, that includes servers, hubs, switches, routers and user devices to a given design requirement without supervision. Provide evidence that the system meets the design requirement.
Technical Competency 02 - Technologist	Analysing a security case ("Make the security case") • Analyse security requirements (functional and non-functional security requirements that may be presented in a security case) against other design requirements (e.g. usability, cost, size, weight, power, heat, supportability etc.), given for a given system or product. Identify conflicting requirements and propose, with reasoning, resolution through appropriate trade-offs.
Technical Competency 03 - Technologist	Structured and reasoned implementation of security in a network ("Build a secure network") • Design and build a simple system in accordance with a simple security case. Provide evidence that the system has properly implemented the security controls required by the security case. The system could be either at the enterprise, network or application layer • Select and configure relevant types of common security hardware and software components to implement a given security policy Design a system employing a crypto to meet defined security objectives. Develop and implement a key management plan for the given scenario/system.
Technical Knowledge and Understanding 01 - Technologist	Understands the basics of networks: data, protocols and how they relate to each other; the main routing protocols; the main factors affecting network performance including typical failure modes in protocols and approaches to error control.
Technical Knowledge and Understanding 02 – Technologist	Understands, at a deeper level than from Knowledge Module 1, how to build a security case: describe what good practice in design is; describe common security architectures; be aware of reputable security architectures that incorporates hardware and software components, and sources of architecture.

	Technical Competencies and Technical Knowledge and Understanding – Option 1: Technologist
	patterns and guidance. Understand how to build a security case including context, threats, justifying the selected mitigations and security controls with reasoning and recognising the dynamic and adaptable nature of threats.
Technical Knowledge and Understanding 03 – Technologist	Understands how cyber security technology components are typically deployed in networks and systems to provide security functionality including: hardware and software.
Technical Knowledge and Understanding 04 - Technologist	Understands the basics of cryptography – can describe the main techniques, the significance of key management, appreciate the legal issues.

4 Apprenticeship Occupational Standard – Option 2: Risk Analyst

	Technical Competencies and Technical Knowledge and Understanding – Option 1: Technologist
Ref	**Competency Standard**
Technical Competency 01 – Risk Analyst	Cyber security risk assessment • Conduct a cyber-risk assessment against an externally (market) recognised cyber security standard using a recognised risk assessment methodology. • Identify threats relevant to a specific organisation and/or sector. Information security policy and process • Develop an information security policy or process to address an identified risk. • Develop an information security policy within a defined scope to take account of a minimum of 1 law or regulation relevant to cyber security.
Technical Competency 02 – Risk Analyst	Audit and assurance • Take an active part in a security audit against a recognised cyber security standard, undertake a gap analysis and make recommendations for remediation.
Technical Competency 03 – Risk Analyst	Incident response and business continuity • Develop an incident response plan for approval (within an organisations governance arrangements for incident response). • Develop a business continuity plan for approval (within an organisations governance arrangements for business continuity).
Technical Competency 04 – Risk Analyst	Cyber security culture in an organisation • Assess security culture using a recognised approach. • Design and implement a simple 'security awareness' campaign to address a specific aspect of a security culture.
Technical Knowledge and Understanding 01 – Risk Analyst	Understands relevant types of risk assessment methodologies and approaches to risk treatment; can identify the vulnerabilities in organisations and security management systems; understand the threat intelligence lifecycle; describe

	Technical Competencies and Technical Knowledge and Understanding – Option 1: Technologist
	different approaches to risk treatment. Understand the role of the risk owner and contrast that role with other stakeholders.
Technical Knowledge and Understanding 02 – Risk Analyst	Understands, at a deeper level than from Knowledge Module 1, the legal, standards, regulations and ethical standards relevant to cyber security: governance, organisational structure, roles, policies, standard, guidelines and how these all work together to deliver identified security outcomes. Also awareness of the legal framework, key concepts applying to ISO27001 (a specification for information security management), and awareness of legal and regulatory obligations for breach notification

5 Apprenticeship Occupational Brief

	'The What' – what the apprentice has shown they can do
Dimensions	**Description of what significantly above the expected level of quality looks like**
Breadth – the range of tools and methods understand and applied	Understands and applies a wide range of tools and methods. Accurately and appropriately applies and effectively implements the right tools and methods in a variety of different situations.
Depth – the level to which these tools and methods are understood and applied	A capable user - exploits the functionality/capability of the tools and methods. Broad understanding of different tools and methods and how and why they can be applied in different contexts.
Complexity – the extent and prevalence of inter-related and interdependent factors in the work and how well the apprentice has dealt with these	Deals confidently and capably with interrelated and interdependent factors in their work.

	'The How' - the way in which the work has been done
Competency Standard	**Minimum, expected, requirements for a pass**
Apprentices can demonstrate the full range of skills, knowledge and behaviours required to fulfil their job role	Knows what skills, knowledge and behaviours are needed to do the job well. Are aware of their own strengths in the job role, and any areas for improvement. Appreciate who else is important, for them to do their job and fulfil the role effectively (e.g. colleagues, managers, other stakeholders).

	'The How' - the way in which the work has been done
	Are aware of potential risks in the job role (e.g. security, privacy, regulatory.) Use personal attributes effectively in the role. Understand how the job fits into the organisation as a whole.
Apprentices can demonstrate how they contribute to the wider business objectives and show an understanding of the wider business environments	Understands the goals, vision and values of the organization. Aware of the commercial objectives of the tasks/ projects they are working on. Understands their role in meeting or exceeding customers' requirements and expectations. Is in tune with the organisation's culture.
Apprentices can demonstrate the ability to use both logical and creative thinking skills when undertaking work tasks, recognizing and applying techniques from both.	Logical thinking: • Recognises the conclusion to be reached • Proceeds by rational steps • Evaluates information, judging its relevance and value • Supports conclusions, using reasoned arguments and evidence Creative thinking: • Explores ideas and possibilities • Makes connections between different aspects • Embraces ideas and approaches as conditions or circumstances change
Apprentices can show that they recognise problems inherent in, or emerging during, work tasks, and can tackle them effectively	Problem-solving: • Analyses situations • Defines goals • Contributes to the development of solutions • Prioritises actions • Deals with unexpected occurrences

	'The How' - Criteria for Merit and Distinction
Dimensions	**Description of what significantly above the expected level of quality looks like**
Responsibility – the scope of responsibility and level of accountability demonstrated in the apprentices work	Undertakes work that is more complex, more critical or more difficult. Works independently and takes responsibility.
Initiative	Demonstrates an ability to extend or enhance their approach to work and the quality of outcomes. Doesn't just solve the problem but explores all known options to do it better, more efficiently, more elegantly or to better meet customer needs.
Delivery focus – the extent to which the apprentice has shown they can grasp the problems, identify solutions and make them happen to meet client needs	Shows good project management skills, in defining problem, identifying solutions and making them happen. Demonstrates a disciplined approach to execution, harnessing resources effectively. Drives solutions – with a strong goal focused and appropriate level of urgency.

	'The With Whom' - the personal and interpersonal qualities the apprentice has brought to internal and external relationships
Competency Standard	**Minimum, expected, requirements for a pass**
Apprentices can manage relationships with work colleagues, including those in more senior roles, customers/clients and other stakeholders, internal or external and as appropriate to their roles, so as to	Managing relationships: • Understands the value and importance of good relationships • Acknowledges other people's accomplishments and strengths • Understands how to deal with conflict • Promotes teamwork by participating Customer/client relationships:

	'The With Whom' - the personal and interpersonal qualities the apprentice has brought to internal and external relationships
gain their confidence, keep them involved and maintain their support for the task/project in hand Apprentices can establish and maintain productive working relationships, and can use a range of different techniques for doing so.	• Understands their requirements, including constraints and limiting factors • Sets reasonable expectations • Understands how to communicate with them in decisions and actions • Interacts positively with them • Provides a complete answer in response to queries ('transparency', 'full disclosure') Stakeholders: • Understands who they are and what their 'stake' is • Prioritises stakeholders in terms of their importance, power to affect the task and interest in it • Agrees objectives
Apprentices can communicate effectively with a range of people at work, one-to-one and in groups, in different situations and using a variety of methods. Apprentices can demonstrate various methods of communication, with an understanding of the strengths, weaknesses and limitations of these, the factors that may disrupt it, and the importance of checking other people's understanding.	Intention/purpose: • Understands the purpose of communicating in a particular situation or circumstance (e.g. inform, instruct, suggest, discuss, negotiate etc.) • Checks that the person/people with whom one is communicating also understand the purpose • Is sensitive to the dynamics of the situation • Is aware of anything that might disrupt the effectiveness of the communication (e.g. status, past history) a. Method: • Understands the most appropriate method for the situation • Aware of the limitations of the chosen method, and the possible risks of miscommunication (e.g. ambiguity) • Takes account of the affective dimensions of the method (e.g. body language, tone of voice, eye contact, facial expression etc.) b. Execution: • Expresses self clearly and succinctly, but not over-simplifying

	'The With Whom' - the personal and interpersonal qualities the apprentice has brought to internal and external relationships
	• Checks that the other person/people understand what is being expressed
	• Takes account of the potential barriers to understanding (e.g. filtering, selective perception, information overload)
	• Modifies the purpose and methods of communication during a situation in response to cues from the other person/people

	'The With Whom' - Criteria for Merit and Distinction
Dimensions	**Description of what significantly above the expected level of quality looks like**
Scope and appropriateness – the range of internal and external people and situations that the apprentice has engaged appropriately and effectively with	Internally – works alone, 1:1, in a team and with colleagues at all levels. Externally – works with customers, suppliers and partners in a variety of situations. Reads situations, adapts behaviours, and communicates appropriately for the situation and the audience.
Reliability – the extent to which they perform and behave professionally	Can be trusted to deliver, perform and behave professionally, manages and delivers against expectations, proactively updates colleagues and behaves in line with the values and business ethics.
A role model and exemplar to others	Actively works with others and leads by example.

4   End-point assessment guidance for Centres/End-Point Assessment Customers

Introducing end-point assessment to the apprentice

Employers/training providers should make the apprentice aware of the different assessment methods that make up the end-point assessment of the apprenticeship prior to the gateway process.

While end-point assessments will be assessed by the IEPA, for this apprenticeship the following assessment methods it is the responsibility of the employer/training provider to introduce the assessments to the apprentice ahead of the end-point assessment visit.

- Employer reference
- Summative portfolio
- Synoptic project
- Independent End-Point Assessor (IEPA) interview.

Further information around what can be shared and the timelines around this can be found in the **Task Instructions for Centres/end-point assessment customers/employers** sections within this document. When introducing any assessments a realistic timeframe should be set for completion of each task, in line with the timeline agreed with City & Guilds when booking end-point assessment. If tasks are not completed within the agreed timeframe without the Apprentice having a good reason, the timeline for any end-point assessment visit may be reviewed.

For any assessments that occur over a longer duration employers/training providers should work with apprentices to develop a submission schedule that aligns with the overall timeline for assessments and with the timelines agreed with City & Guilds when booking end-point assessment

Health and safety / Codes of practice

The importance of safe working practices, the demands of the Health and Safety at Work Act and any Codes of Practice associated with the industry **must** always be adhered to.

The requirement to follow safe working practices is an integral part of all City & Guilds assessments, and it is the responsibility of employer/end-point assessment customer to ensure that all relevant health and safety requirements are in place when working on any projects or before apprentices begin any practical assessment.

Should an IEPA identify something, when assessing evidence submitted for the apprenticeship or pick up on something during an oral assessment that indicates that health and safety practices and procedures may not have been adhered to, they will feed this back to City & Guilds end-point assessment team.

Authenticating the apprentices work

When making judgements on evidence of unobserved tasks, the IEPA must ensure all decision satisfy VACS. For evidence produced outside controlled conditions the apprentice will be required to

- sign a declaration that the work is their own
- reference all sources.

The centre/employer can also aid authentication by:

- supplementary (oral) questioning to gauge familiarity with the topic

- looking out for any changes to the apprentices usual writing style, unusual sources/examples or the use of e.g. US spellings or phrases that might indicate cutting and pasting from the internet
- requiring access to evidence of steps in the process e.g. drafts, notes, planning etc.

For further information on authenticating work, see: **www.ofqual.gov.uk/plagiarism-teachers**

City & Guilds have produced evidence reference forms that include a declaration of authenticity form, these must be completed when submitting evidence and can be found in the EPA recording forms for end-point assessment customers/employers/training provider's document. These should be completed and signed by both the tutor/employer and the apprentice.

Recording forms

City & Guilds have designed specific recording forms for apprentices and centres / end-point assessment customers / employers to use for this apprenticeship.

These can be found in **End-Point Assessment Recording Forms for Centres / End-Point Assessment Customers / Employers** document

Centres must use the forms provided by City & Guilds in the format laid out in this document.

Determining the overall apprenticeship grade

The IEPA will be responsible for completing grading for all tasks, and in communicating these outcomes to City & Guilds for overall grading of the apprenticeship. Grading takes place at the end of the apprenticeship, following the completion of the interview: the last task in the end-point assessment. There is one grade – and none of the tasks are graded separately.

The overall grade for the apprenticeship will be calculated using a holistic approach.

Assessment method	Grade scale
Employer Reference	
Summative Portfolio	
Synoptic Project	X/P/M/D
Interview	

Feedback

The IEPA will not provide any feedback to the apprentice during or immediately following the end assessment process. Feedback (if given) will only be provided to fail apprentices, following submission of evidence to City & Guilds and after any grade determination has been carried out.

Results submission and Certification

The City & Guilds IEPA will submit the apprentice results to City & Guilds. City & Guilds will issue the End Assessment record of achievement confirming the grade achieved and will notify the appropriate body who will issue the Apprenticeship certificate.

Opportunities to retake/resit or improve results for end-point assessments

An apprentice who passes the end-point assessment cannot re-sit to achieve a higher grade.

If an apprentice fails any part of the end-point assessment they should not retake the end-point assessment until they have completed a period of further learning or training and the employer and training provider (if applicable) is confident the apprentice is competent. A separate end-point assessment resit booking will need with City & Guilds for the relevant assessment.

If an apprentice fails any part of the end-point assessment for reasons out of their control, a resit can be booked at the earliest opportunity.

Opportunities to repeat tasks

It is at the centre's discretion whether to allow an apprentice to repeat a task, unless otherwise specified. Apprentices must take a different version of the task, where provided, and not repeat the previous task. An apprentice should not be allowed to repeat until it is evident that they are ready to undertake the task.

5   End-Point Assessment Resources list

Resource required	
Synoptic project	A quiet room with adequate lighting, space and privacy. It must be away from the pressures of work activities, in a controlled environment. This may be on or off the employers' premises.
	A responsible person to supervise the assessment activity during its entirety.
	Training providers may wish to provide some or all of the synoptic project tasks within a virtual environment – this is allowed, and some projects will refer specifically to these instances, as long as it does not impact the validity of the assessment or the ability of the apprentice to generate their own work.
Interview with an Independent End Assessor	A suitable room for the interview to take place, large enough to accommodate all those involved including panel member where applicable.
	Seating area or room for any other apprentices to wait.
	Access to water and cups.
	Where applicable, internet access and suitable equipment for remote assessment as outlined in the manual for end-point assessment services.

6   End-point assessment timeline

Time line	Activity
On-going prior to completion	**Employer** • Reviews progress and ensures Apprentices' performance is on track as part of the regular performance management system • Identifies gaps and creates a plan for the end assessment with the Apprentice. **Apprentice** • Completes required on-programme knowledge single-unit qualifications according to their specialism, each assessed through a multiple-choice exam delivered on-line: **Core Knowledge Qualification:** • Cyber Security Introduction (3660-01) **Technologist specialism:** • Network and Digital Communications Theory (3660-02) • Security Case Development and Design Good Practice (3660-03) • Security Technology Building Blocks (3660-04) • Employment of Cryptography (3660-05) **Risk Analyst specialism** • Risk Assessment (3660-06) • Governance, Law, Regulation and Standards (3660-07) • Completes the English and Maths components of the Apprenticeship
Four months before planned completion	**Line manager/tutor and apprentice:** • Meet to review progress for final assessment • Refine plans for all components of the final end-point assessment. • Chooses the synoptic project. **Apprentice:** • Completes work on summative portfolio.
Gateway process	The Apprentice and line manager/tutor review progress and confirm that the apprentice is ready for end-point assessment. • The employer/training provider submits the completed **Gateway Declaration Form**.

Time line	Activity
Book end-point assessment in line with City& Guilds booking timelines	Employer/training provider: • Makes end-point assessment booking with City & Guilds.
Four weeks before the interview	Employer/training provider: • Submits the employer reference • Submits the summative portfolio. Apprentice: • Apprentice takes their synoptic project assessment
End of Apprenticeship	Independent End-point Assessor /Apprentice: • Interview undertaken. Grade communicated to the centre.

Assessment 700/750   End-point assessment - Holistic

Assessment specification

Component number or Task	Description	Coverage	Grading
1	Employer Reference	TC01 – 04 (both core and specialism) TKU01 – 04 (both core and specialism) USAB01 - 08	
2	Summative Portfolio	TC01 – 04 (both core and specialism) TKU01 – 04 (both core and specialism) USAB01 - 08	
3	Synoptic Project	TC01 – 04 (both core and specialism) TKU01 – 04 (both core and specialism) USAB01 - 08	P/D/X
4	Independent End Assessor (IEPA) Interview	TC01 – 04 (both core and specialism) TKU01 – 04 (both core and specialism) USAB01 - 08	

Assessment 700/750   End-Point Assessment - Holistic

Task instructions for Apprentices

Task 1 Employer reference

Your employer will have carried out continuous monitoring of your progress in the role and will have documented evidence to refer to regarding your performance against the standard. Your employer will provide a reference setting out their views of the quality of your work. The employer will not grade your work or provide a rating.

Task 2 Summative portfolio

You will have compiled a portfolio of evidence during your apprenticeship, successfully demonstrating the required knowledge, competencies, skills and behaviours. You must now select appropriate evidence from your portfolio to demonstrate the minimum requirements of the standard. These pieces will contain evidence from real work projects which have been completed during the apprenticeship, usually towards the end, and which taken together, cover the totality of the standard.

Your summative portfolio must be submitted in electronic format. When submitting your summative portfolio you must ensure that you include a signed copy of the **Declaration of Authenticity Form**.

Task 3 Synoptic Project

You will choose a project which is the most appropriate project for you, based on your current job role. Each of the projects available will present a typical business task.

The synoptic project presents evidence from a business-related project testing the application of a selection of your knowledge, skills and behaviours as defined in the standard. The project will specify which selection of knowledge, skills and behaviours it is designed to test in the brief.

The project is designed to assess all apprentices in a consistent way, irrespective of your particular workplace and role within the company, and will be completed outside of day-to-day work pressures.

The project will be undertaken over a maximum of **three working days**.

Each project will enable the following to be demonstrated
- the application of knowledge and skills to meet the project outcomes
- the approach to planning and completion of the task
- the application of the relevant behaviours.

Task 3 Independent End Assessor (IEPA) interview

The interview will be booked for you by your centre/employer. The interview will be conducted between yourself and your appointed Independent End-point Assessor (IEPA). The conditions under which your interview will take place will be arranged with the City & Guilds end-point assessment team. This could be in a room on the premises of your employer or centre, taken in person or remotely. The interview is a **structured discussion** between yourself and the Independent End-point Assessor, focusing on the summative portfolio and the synoptic project, with reference to the employer reference as appropriate.

It covers both what you have produced and also how you have done it. This enables the end-point assessment to include the full range of technical knowledge and competencies as well as the skills, attitudes and behaviours. The interview can draw on broader experience from the workplace, but the

initial and the primary focus is on the work presented in the summative portfolio and the synoptic project. The interview will be undertaken by Independent End-point Assessor and it is the same Independent End-point Assessor who has assessed the portfolio and the project and who will also make the grading decision.

The interview will take place following the completion and assessment of the project and the portfolio.

Purpose of the interview
The purpose of the interview is to:
- clarify any questions the Independent end-point Assessor has from their assessment of the portfolio and the project
- explore any comments raised from reviewing the employer's reference
- confirm and validate judgements about the quality of work
- explore aspects of the work, including how it was carried out, in more detail
- provide further evidence for the Independent end-point Assessor to make a holistic decision about the grade to be awarded.

The interview will cover
- what you submitted in the summative portfolio
- what you produced in the synoptic project
- the standard of your work, as evidenced in the portfolio and the project
- how you approached the work submitted in the portfolio and the project.

Time allowed for interview
The interview will last up to a maximum of **120 minutes**.

Assessment 700/750   End-Point Assessment - Holistic

Task instructions for End-point Assessment Customers

Task 1 Employer reference

You will have carried out continuous monitoring of the apprentice's progress in the role and will have documented evidence to refer to regarding the apprentice's performance against the standard. You will provide a reference setting out your views of the quality of the apprentice's work. You must not grade or provide a rating, rather you should focus on the skills, behaviours and knowledge the apprentice has gained and displays at the point of signing off the Gateway Form. The Employer Reference Form is included in this pack.

Task 2 Summative portfolio

A portfolio of evidence of work will be compiled during the apprenticeship, successfully demonstrating the required competencies, knowledge and behaviours covering every element of the standard. Alongside work-based evidence, including but not limited to Fault log/CRM entries, emails, client acceptance documentation, it will also include evidence from other people, including but not limited to mid and end-of-year performance reviews, reports from coaches and feedback from line managers demonstrating acceptable or better performance. The apprentice must select appropriate evidence from their portfolio to demonstrate at least the minimum requirements of the standard in its entirety at the final stage of the programme which attests to professional competence at the level. The portfolio is to be submitted in an electronic format.

Signing off the summative portfolio

When signing off the summative portfolio the line manager/tutor must not make any assessment decision on what grade the apprentice has achieved. By signing and dating the declaration of authenticity form, the line manager/tutor is confirming that they believe the apprentice will meet the minimum criteria in order to be eligible to submit their portfolio for end-point assessment.

Guidance on submitting evidence in a summative portfolio

A summative portfolio is a concise collection of evidence selected from the breadth of available evidence. It efficiently demonstrates the apprentice's performance in relation to the specified criteria, and showcases their highest quality work. The showcase is not directly assessed by the IEPA, but is used as the basis for the professional discussion or interview The IEPA uses it to familiarise themselves with the apprentice's work in preparation for the discussion, and the apprentice can use it to provide tangible evidence, backing-up their accounts of their work during the discussion.

Types of evidence

Ideally the evidence should be produced in electronic format, or scanned/ photographed to give a clear electronic representation, as it must be submitted electronically for end-point assessment.   The evidence in the summative portfolio must be chosen to provide valid evidence for the specified criteria being assessed.

It can be for example:
- Products/ artefacts – for instance
  o Final products/ artefacts where electronic eg CAD designs, Web pages etc.
  o Creative products eg, look-books, mood boards, drawings, sketches.

o A set of digital images showing a completed product from a number of angles and close-ups of relevant details. Where relevant, before and after images and stages in development should be included.

o Electronic documents such as letters, memos, reports, plans.

- Observation evidence – a statement from a suitably qualified person (eg tutor) describing the apprentice's performance in the workplace while carrying out naturally occurring activities. This statement will normally be backed up with video/ audio evidence recording key details.

- Reflective account – an account from the apprentice providing evidence of their thinking eg their considerations of processes/materials used; reasons for decisions made; evaluations and suggested improvements to future practice.

- Witness testimony – evidence from a relevant witness giving their account of what the apprentice has done in their job role. The witness can range from a manager to a customer. All evidence must be of the apprentice's own work and, for any group work, must clarify and focus only on their contribution.

Where necessary, confidentiality and data protection requirements must be adhered to eg permissions for use of video / images containing identifiable 3rd parties (eg clients), anonymisation of documentation and permissions from clients when submitting designs and plans commissioned by them

Selecting Evidence

Before selecting the evidence to form the portfolio, the apprentice should review the assessment requirements stated in the task/standard:

- The criteria to be covered by the portfolio
- The type of evidence that can be presented (see above)
- The amount of evidence that should be presented.
- The period of time from which the evidence should have originated (usually this will be towards the end of the apprenticeship).

To assemble their portfolio, the apprentice should consider all the evidence they have available that shows they have met the requirements being assessed. Evidence collected towards the end of their apprenticeship program, as they become independent in their work, is likely to provide the most holistic evidence – ie covering a number of criteria at once. From this, they should select evidence that most efficiently meets all the relevant criteria and which demonstrated their best performance. While there may be some overlap between the evidence collected, multiple pieces of evidence showing coverage of the same criteria should not normally be submitted for end-point assessment.

There are two questions that an apprentice should consider when selecting work to form their portfolio:

1. Which pieces holistically (most efficiently) give evidence that together cover all of the relevant criteria?
2. Is this the best evidence I have, showing that I have met all of the requirements for the higher grade?

Confirming the evidence selection

When the apprentice has selected the evidence to form their portfolio, this must be reviewed by the employer / provider to ensure:

- All assessment requirements have been met;
- It is line with any requirements relating to the type and amount of evidence required and when the evidence should have originated;
- There is no unnecessary duplication of evidence against the same criteria;
- The work selected represents the best evidence available in relation to grading requirements;
- The clarity of any images or scanned evidence is sufficient to determine the quality of the original evidence.
- Authenticity of evidence has been established.

Preparing evidence for submission

Evidence being uploaded for end-point assessment must be presented as follows:

- Evidence must have a header on each page containing the name and e-signature of the apprentice together with the date the evidence was produced;
- Along with the City & Guilds evidence reference form (found in the end-point assessment recording forms for centre /end-point assessment customers document) completed to
    - o Cross-reference each criterion to the relevant piece of evidence
    - o Formally declare the authenticity of all evidence.
- Each piece of evidence must be referenced to the criteria it is being submitted against either on an evidence reference form or within the header.

Task 3 Synoptic Project

You will assist the apprentice in choosing a project which is most appropriate for each apprentice based on their current job role. Each of these projects will present a typical business task.

The synoptic project presents evidence from a business-related project testing the application of a selection of the knowledge, skills and behaviours defined in the standard. Each project will specify which selection of knowledge, skills and behaviours it is designed to test. The project does not need to cover every competence, but must cover a broad breadth of the competence outcomes, including the design, installation, maintenance and support of a communication network.

The project is designed to assess apprentices in a consistent way, irrespective of their particular workplace and their particular role within their company, and must be completed outside of day-to-day work pressures.

Each project will enable the following to be demonstrated
- the application of knowledge and skills to meet the project outcomes
- the approach to planning and completion of the task
- the application of the relevant behaviours.

Each project will take, typically, **three working days** to complete. It is up to the centre/employer how the time is split. The centre/employer should ensure that working time directives are met with regards to breaks.

Apprentices will complete their project off-the-job, so that they are away from the day to day pressures of work and in a 'controlled' environment, which may be on the employer's premises or the centre's premises. This is an unseen assessment which will be under controlled conditions.

The controlled environment

Any room in which the synoptic project is held must provide apprentices with appropriate conditions for undertaking the synoptic project.

It is not expected that the centre/employer have a dedicated controlled environment that is solely for this purpose, however, for the delivery of a synoptic project a controlled environment that meets the relevant requirements must be provided.

The requirements for the controlled environment will include a quiet room, away from the normal place of work, with a dedicated work-station, with access to all the required equipment and with someone allocated as a responsible person by the employer or by the centre responsible for the controlled environment and to ensure it is the apprentice's own work.

The resource list for each synoptic project can be found on the project brief. This includes a list of the equipment required to deliver the synoptic project.

If more than one apprentice takes the project at the same time in the same room, they must not communicate and must have separate work stations and equipment.

The responsible person

The role of the responsible person is to ensure that the synoptic project is conducted according to these instructions, in order to:

- check that the apprentice has access to the necessary materials for the project
- ensure all apprentices have an equal opportunity to demonstrate their abilities
- ensure the security of the synoptic project before, during and after the synoptic project
- prevent possible apprentice malpractice
- prevent possible administrative failures
- assist with providing information for the apprentice as instructed by the EPA
- deal with hardware, software and communication failures (which may affect individual workstations or the whole network). The responsible person should normally allow the apprentice(s) to continue the assessment session at a different workstation or at a later time, if necessary, without loss of working time. In extreme cases, please contact City & Guilds End-point assessment team **EPA@cityandguilds.com**
- provide sections of the synoptic project assessment at the appropriate time. Some of the projects have sections that are unseen by the apprentice until they have completed a specified task. Guidance will be provided in the synoptic project.
- carry out observations and instructions as required in the project.

The responsible person must not:

- make any comment where an apprentice believes that there is an error or omission on the synoptic project. They must however, refer the matter immediately to **EPA@cityandguilds.com** or for urgent queries please contact our normal customer support team
- give any information to apprentices about possible mistakes in the project, unless there is an erratum notice or permission has been given by the End-point assessment team.
- comment on the content of the synoptic project
- re-phrase a request for an apprentice
- explain any subject-specific or technical terms to an apprentice
- offer any advice or comment on the work of an apprentice.

Task 3 Independent End Assessor (IEPA) interview

The interview will be booked by you for the apprentice. The time and date is to be arranged with the City & Guilds End-point assessment team after the synoptic project has taken place. The interview will be conducted between the apprentice and the appointed Independent End-point Assessor. The conditions under which the interview will take place will be arranged with the City & Guilds End-point assessment team. This could be in a room on the premises of the employer or the centre, in person or taken remotely. The interview is a structured discussion between the apprentice and the Independent End-point Assessor only, focusing on the summative portfolio and the synoptic project, with reference to the employer reference as appropriate.

It covers both what the apprentice has produced and also how they have done it. This enables the end-point assessment to include the full range of technical knowledge and competencies as well as the underpinning skills, attitudes and behaviours. The interview can draw on broader experience from the workplace, but the initial and the primary focus is on the work presented in the portfolio and the project. The interview will be undertaken by an Independent End-point Assessor and it is the same Independent End-point Assessor who has assessed the portfolio and the project and who will also make the grading decision. The interview will take place following the completion and assessment of the portfolio and the project.

Time allowed for interview
The interview will last up to a maximum of 120 minutes.

Useful contacts

Centres	**E: centresupport@cityandguilds.com**
Exam entries, Certificates, Registrations/enrolment, Invoices, Missing or late exam materials, Nominal roll reports, Results	
Learners	**E: learnersupport@cityandguilds.com**
General qualification information	
Other contacts	**W: www.cityandguilds.com/help/contact-us**
For other contacts visit the Contact Us page of our website	

About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group operates from three major hubs: London (servicing Europe, the Caribbean and Americas), Johannesburg (servicing Africa), and Singapore (servicing Asia, Australia and New Zealand). The Group also includes the Institute of Leadership & Management (management and leadership qualifications), City & Guilds Licence to Practice (land-based qualifications), the Centre for Skills Development (CSD works to improve the policy and practice of vocational education and training worldwide) and Learning Assistant (an online e-portfolio).

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