

Infrastructure Technician (Level 3)



Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Apprenticeship Standard Infrastructure Technician (Level 3)

Blended Learning breakdown

		Training Centre	Remote
Phase 1	Induction & Initial Assessment		Skills Coach visit
Phase 2	Networking Fundamentals Part 1	4 days	Training Centre only
	Networking Fundamentals Part 2 (98-366 MTA Networking Fundamentals)	2 days	Training Centre only
	Architecture	3 days	25 hours self-study 2 remote training sessions
	Business Processes	4 days	20 hours self-study 3 remote training sessions
	Mobile & Operating Systems Part 1/Part 2	3 days/2 days	20 hours self-study 3 remote training sessions
	Cloud Services Part 1/Part 2	3 days/2 days	20 hours self-study 3 remote training sessions
	Coding & Logic Parts 1 - 2	2 days per part	20 hours self-study 4 remote training sessions
Phase 3	Assessment Gateway	Up to 1 week*	Training Centre only
Phase 4	End Point Assessment	3 - 5 days	Training Centre only

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

Skills Development Coach will conduct the induction in their first visit

Functional Skills

If required, learners will sit a Maths and/or 3 English exams. Workshops can take up to 3 days. Each exam takes up to 2 hours.

Business Processes & Customer Services

- Understands and complies with business processes
- Understanding of Security Operating Procedures
- Understanding and ability to work confidentially
- Understanding of how to work within the Company Operating Procedures
- Understanding and ability to comply with Data Protection
- Working knowledge of business IT skills relevant to the organisation
- Understanding of company IT requirements
- Understanding of company IT systems and platforms
- Understanding of company IT business required skills
- Understand software life cycles
- Understanding of desktop applications, messaging systems, document management



Mobile & Operating Systems

- Understands the similarities, differences and benefits of the current Operating Systems available
- Understanding of different platforms
- Understands the process for constructing PCs with applied Software utilised
- Understands and is able to apply knowledge to various operating systems with installations required for end to end testing.
- Understand native applications and tools
- Understands security principles associated with different platforms and operating systems
- Understands how to operate remotely and how to deploy and securely integrate mobile devices
- Undertakes a Data Network Deployed Exercise to implement and deploy remote and mobile communications technology
- Understands Secure Communications Interfaces for mobile connectivity
- Understand mobility
- Understand remote management and assistance
- Understand security in mobile devices



Networking & Architecture

- Working knowledge of: a range of cabling and connectivity, the various types of antennas and wireless systems and IT test equipment
- Understands maintenance processes and applies them in working practices
- Understands the similarities, differences and benefits of up-to-date hardware available
- Understands and applies the basic elements and architecture of computer systems and business IT architecture
- Ability to understand and where to apply the relevant numerical skills e.g. Binary
- Understands the relevant networking skills necessary to maintain a secure network



Cloud Services

- Understanding and working knowledge of Cloud and Cloud Services
- Understand how to create and configure virtual machines
- Understand hosted applications, such as: email, server, storage, desktops
- Understand how to configure secure passwords and management of passwords
- Understand how to manage user and security groups and/or cloud identities and their importance
- Understand how to configure DNS records for services
- Understand how to enable client connectivity to Cloud Service
- Understands the importance of disaster recovery and how a disaster recovery plan works and their role within it
- Understand backup and recovery methods
- Understand what a Disaster recovery plan is and where it can be found
- Understand their role within the disaster recovery plan
- Understand what should be in a recovery plan
- Understand how and when it should be practiced or tested
- Understand how to implement and configure system recovery
- Understand how to configure file recovery



Coding & Logic

- Understands the similarities and differences between a range of coding and logic
- Understand working/scripting at command line: particularly when supporting any server work
- Understand and recognise different coding and language
- Understand application life cycle management
- Understand algorithms and data structures
- Understand web page development



Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)
Preparation week to understand the four elements of the gateway.

Assessment Phase

- Summative Portfolio
- Synoptic Project
- Technical Interview with SME
- Employer Reference

Achievement of Apprenticeship

BCS
Infrastructure Technician
(Level 3)

Software Development Technician (Level 3)



Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Software Development Context and Methodologies (2 Parts)

Programming (3 Parts)

Software Development Fundamentals (3 Parts)



Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Apprenticeship Standard Software Development Technician (Level 3)

Blended Learning breakdown

		Training Centre	Remote
Phase 1	Induction & Initial Assessment		Skills Coach visit
Phase 2	Software Development Context and Methodologies Part 1	3 days	20 hours self-study 4 remote training sessions
	Software Development Context and Methodologies Part 2	3 days	20 hours self-study 4 remote training sessions
	Programming Part 1	3 days	20 hours self-study 4 remote training sessions
	Programming Part 2	3 days	20 hours self-study 2 remote training sessions
	Programming Part 3	3 days	20 hours self-study 2 remote training sessions
	Software Development Fundamentals Part 1	3 days	Training Centre only
	Software Development Fundamentals Part 2	3 days	Training Centre only
	Software Development Fundamentals Part 3 (MTA Software Development Fundamentals C#)	2 days	Training Centre only
Phase 3	Assessment Gateway	Up to 1 week*	Training Centre only
Phase 4	End Point Assessment	3 - 5 days	Training Centre only

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

Skills Development Coach will conduct the induction in their first visit

MTA Software Development Fundamentals C#

- Computer storage and data types
- Computer decision structures
- How to identify the appropriate method for handling repetition
- Error handling
- The fundamentals of classes
- Inheritance
- Polymorphism
- Encapsulation
- Application life cycle management
- How to interpret application specifications
- Algorithms and data structures
- Web page development
- Microsoft ASP.NET web application development
- Web hosting
- Web services
- Windows apps
- Console-based applications
- Windows Services
- Relational database management systems
- Database query methods
- Database connection methods



Functional Skills

If required, learners will sit a Maths and/or 3 English exams.

Workshops can take up to 3 days. Each exam takes up to 2 hours.

Software Development Context and Methodologies

- The business context and market environment for software development
- How to recognise that there are different methodologies that can be used for software development
- The roles within the software development team
- The structure of software applications and the particular context for the development platform (whether web, mobile, or desktop applications)
- All stages of the software development lifecycle
- Different types of testing
- How to test code
- The role of configuration management and version control systems and how to apply them



Programming

- How to implement code, following a logical approach
- How code integrates into the wider project
- How to follow a set of functional and non-functional requirements
- The end-user context for the software development activity
- The importance of seamlessly connecting applications to databases and understand types of data storage and their applications
- How to demonstrate knowledge of database normalisation
- Why there is a need to follow good coding practices
- The principles of good interface design
- The importance of building security in to software at the development stage



Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)

Preparation week to understand the four elements of the gateway.

Assessment Phase

- Summative Portfolio
- Synoptic Project
- Technical Interview with SME
- Employer Reference

Achievement of Apprenticeship

BCS
Software Development Technician (Level 3)

Digital Marketer (Level 3)



Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Apprenticeship Standard Digital Marketer (Level 3)

Blended Learning breakdown

		Training Centre	Remote
Phase 1	Induction & Initial Assessment		Skills Coach visit
Phase 2	Google Fundamentals of Digital Marketing	Remote only	Distance learning (VLE)
	Principles of Coding Parts 1 - 2	3 days per part	20 hours self-study 6 remote training sessions
	Principles of Coding Part 3 (MTA 98 - 383 Introduction to Programming using HTML and CSS)	2 days per part	20 hours self-study 2 remote training sessions
	Marketing Principles Parts 1 - 2	2 days per part	20 hours self-study 4 remote training sessions
	Digital Marketing Business Principles Parts 1 - 2	3 days per part	20 hours self-study 4 remote training sessions
	Digital Marketing Business Principles Part 3	2 days per part	20 hours self-study 4 remote training sessions
Phase 2	Google Analytics Individual Qualification (IQ)	Remote only	Distance learning (VLE)
	Video and Imaging Software Parts 1 - 2	2 days per part	Training Centre only
Phase 3	Assessment Gateway	Up to 1 week*	Training Centre only
Phase 4	End Point Assessment	3 - 5 days	Training Centre only

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

Skills Development Coach will conduct the induction in their first visit

Functional Skills

If required, learners will sit a Maths and/or 3 English exams.

Workshops can take up to 3 days.
Each exam takes up to 2 hours.

Marketing Principles

- How to apply basic marketing principles
- The role of customer relationship marketing
- How teams work effectively to deliver digital marketing campaigns and can deliver accordingly
- How to apply the customer lifecycle
- The main components of Digital and Social Media Strategies



Video and Imaging Software

- Obtain, insert & combine information for images
- Use imaging software tools to create, manipulate and edit images
- Use video hardware and software to capture sequences
- Use video software tools & techniques to combine and edit sequences
- Play and present video sequences



Google Fundamentals of Digital Marketing

- Get a Business Online
- Make Sure Customers Find You Online
- Promote a Business With Online Advertising
- Expand a Business To Other Countries
- Connect With Customers Over Mobile
- Promote a Business With Content
- Understand Customers Needs and Online Behaviours



Digital Marketing Business Principles

- Summarise and explain how to schedule a series of social media posts
- Explain how to and why a new piece of content on a website is created
- Understand the importance of relevant keywords and keyword-rich content
- Explain why and how a Google AdWords campaign is created
- Explain how to use the different types of tools and explain when it would be appropriate to use them
- Characteristics and Comparisons of the Major Digital and Social Media Platforms
- Summarise the characteristics of how a digital marketing team works in a business environment
- Summarise and explain how to plan valuable digital content based on the needs of the audience and their searching habits
- Explain the characteristics of SEO and the best way to promote and link content
- Digital Etiquette
- Distinguish the different digital platforms in the context of their use in the working environment
- Explain the use of the digital platforms above by competitors and customers
- Explain why information security and its management are important for a digital service organisation
- Recognise sources of threat and risk to digital information and the potential impact
- Explain the key features of an organisations information security policy and their impact on ways of working
- Summarise the importance of following organisational policies and procedures relating to information security
- Security Levels - Precautions and Procedures to Follow to Protect Data



Principles of Coding

- Construct markup that uses metadata elements
- Construct well-formed markup that conforms to industry best practices
- Analyse the impact of using inline styles, internal style sheets, and external style sheets
- Construct and analyse rule sets
- Construct well-formed style sheets that conform to industry best practices
- Construct and analyse markup to structure content and organise data
- Construct and analyse markup that uses HTML5 semantic elements
- Construct and analyse markup that implements navigation
- Construct and analyse markup that uses form elements
- Construct and analyse markup that displays images
- Describe the appropriate use of the img, svg, and canvas elements
- Construct and analyse markup that plays video and audio
- Construct and analyse styles that position content
- Construct and analyse styles that format text
- Construct and analyse styles that format backgrounds and borders
- Analyse styles that implement a simple responsive layout



Google Analytics IQ

- Introducing Google Analytics
- The Google Analytics Layout
- Basic Reporting
- Basic Campaign and Conversion Tracking Countries
- Connect With Customers Over Mobile
- Promote a Business With Content



Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)
Preparation week to understand the four elements of the gateway.

Assessment Phase

- Summative Portfolio
- Synoptic Project
- Technical Interview with SME
- Employer Reference

Achievement of Apprenticeship

BCS
Digital Marketer
(Level 3)

Network Engineer (Level 4)



Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Network Principles
(3 Parts)



Network Systems
& Architecture
(3 Parts)



Network Security
(3 Parts)



Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Apprenticeship Standard Network Engineer (Level 4)

Blended Learning breakdown

		Training Centre	Remote
Phase 1	Induction & Initial Assessment		Skills Coach visit
Phase 2	Network Principles Parts 1 - 3 (CompTIA Network+ Exam)	3 days per part	Training Centre only
	Network Systems & Architecture Parts 1 - 3 (BCS exam)	2 days per part	40 hours self-study 6 remote training sessions
	Network Security Parts 1 - 3 (BCS exam)	3 days per part	40 hours self-study 9 remote training sessions
Phase 3	Assessment Gateway	Up to 1 week*	Training Centre only
Phase 4	End Point Assessment	3 - 5 days	Training Centre only

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

Skills Development Coach will conduct the induction in their first visit

Functional Skills

If required, learners will sit a Maths and/or 3 English exams. Workshops can take up to 3 days. Each exam takes up to 2 hours.

Network Security

- Explain terminology for key IT security concepts
- Describe current vulnerabilities and threats associated with IT security
- Explain risk management methods and risk calculation tools
- Explain and know when to use IT security countermeasures and controls
- Understand how to configure Network Security
- Understand how to configure a network server to enhance security of the server, applications and data
- Describes elements of network security that can be configured on a server to enhance security
- Understand a range of tools and techniques to identify vulnerabilities and threats to a network server
- Understand the concepts of appropriate incident response for Information security incidents and identify different instances and escalate in an appropriate way



Network Systems & Architecture

- Develop a knowledge of the hardware and software components that form a Server
- Install and configure a Server (or configure partition(s) within a server) and test connection to an existing network
- Explain how to configure the elements required to enable a Server to perform a specified role
- Describe the concept of virtualisation and VMs
- Install and configure one or more virtual machines and manage resource allocation using a Hyper-Visor
- Explain the roles and services provided by servers
- Describe how to configure a range of network services and test their operation
- Explain middleware and application services in a networking context through examples and case studies.
- Describe the purpose, benefits and drawbacks of server workload balancing
- Describe a range of different storage solutions used in networks for online and offline storage
- Understand key storage protocols used for network attached storage,
- Describe how to configure network storage devices and profile file



Network Principles

- Describe the role performed by a network of computers and shared devices
- Describe concepts of physical and logical networks and state their main features and the advantages and disadvantages of each
- Explain the typical infrastructure components of physical networks
- Understand network protocol suites and conceptual models
- Explore the fundamentals of network conceptual models
- Compare and contrast the layers and the functionality of the OSI and TCP/IP models and associated devices
- Understand the concepts of IP addressing and routing and IP addressing schemes, Routing concepts and protocols
- Describe the differences between a class based (IPv4) and Classless (CIDR)
- Inter Domain Routing scheme (CIDR)
- Compare and contrast the advantages and disadvantages offered by static and dynamic for a Local Area Network



Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)
Preparation week to understand the four elements of the gateway.

Assessment Phase

- Summative Portfolio
- Synoptic Project
- Technical Interview with SME
- Employer Reference

Achievement of Apprenticeship

BCS
Network Engineer
(Level 4)

Software Developer (Level 4)



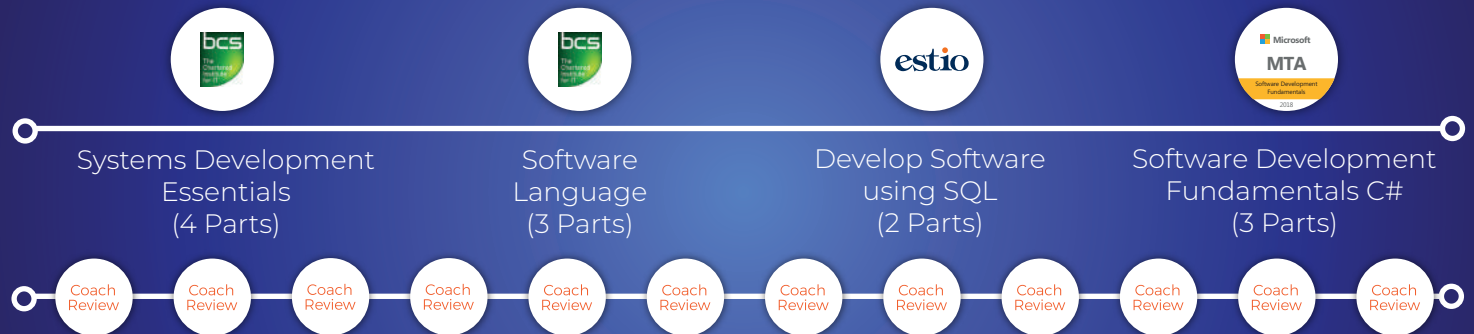
Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Apprenticeship Standard Software Developer (Level 4)

Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Blended Learning breakdown

		Training Centre	Remote
Phase 1	Induction & Initial Assessment		Skills Coach visit
Phase 2	Systems Development Essentials Parts 1 - 3	3 days per part	20 hours self-study 9 remote training sessions
	Systems Development Essentials Part 4	2 days	Training Centre only
	Software Language Parts 1 - 3 (BCS exam)	3 days per part	20 hours self-study 9 remote training sessions
	Develop Software using SQL Parts 1 - 2	2 days per part	Training Centre only
	Software Development Fundamentals C# Parts 1 - 2	3 days per part	Training Centre only
	Software Development Fundamentals C# Part 3 (MTA Software Development Fundamentals)	2 days	Training Centre only
Phase 3	Assessment Gateway	Up to 1 week*	Training Centre only
Phase 4	End Point Assessment	3-5 days	Training Centre only

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

Skills Development Coach will conduct the induction in their first visit

Functional Skills

If required, learners will sit a Maths and/or 3 English exams. Allow 1-2 days per exam.

Software Development Fundamentals C#

- Computer storage and data types
- Computer decision structures
- How to identify the appropriate method for handling repetition
- Error handling
- Algorithms and data structures
- The fundamentals of classes
- Inheritance
- Polymorphism
- Encapsulation
- Application Life Cycle management
- How to interpret application specifications
- Web page development
- Microsoft ASP.NET web application development
- Web hosting
- Web services
- Windows apps
- Console-based applications
- Windows Services
- Relational database management systems
- Database query methods
- Database connection methods



Systems Development Essentials

- System Development roles and responsibilities
- Architecture
- Systems Development Lifecycles
- Development Practices
- System Development roles and responsibilities
- Architecture
- Systems Development Lifecycles
- Development Practices
- Quality Assurance
- CASE, CAST, Application Lifecycle Management tools



Developing Software Using SQL

- Know how to query and display data from a single table
- Query and display data from multiple tables
- Manipulate data in tables
- Create and manage tables, views and indexes



Software Language

- Purpose of software design
- Use of software design approaches and software patterns in the software design process
- Functional and Non Functional Requirements
- How software designs can be documented and how this supports implementation
- The need for secure development and how this can be included in the software development process
- The need for software maintainability and how software can be implemented to enable re-use and maintainability.
- Computational Theory and Mathematics:
 - Key techniques of maths required for software development.
 - How algorithms are used to create a logical solution to a computable problem.
 - Primary elements of programming logic.



Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)
Preparation week to understand the four elements of the gateway.

Assessment Phase

- Summative Portfolio
- Synoptic Project
- Technical Interview with SME
- Employer Reference

Achievement of Apprenticeship

BCS
Software Developer
(Level 4)

Software Tester (Level 4)



Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Apprenticeship Standard Software Tester (Level 4)

Blended Learning breakdown

		Training Centre	Remote
Phase 1	Induction & Initial Assessment		Skills Coach Visit
Phase 2	Software Development Fundamentals C# Parts 1 - 2	3 days per part	Training Centre only
	Software Development Fundamentals C# Part 3 (MTA 98 - 361 Software Development Fundamentals C#)	2 days	Training Centre only
	Testing Tools Parts 1 - 4	2 days per part	20 hours self-study 8 remote training sessions
	Testing Concepts Parts 1 - 2	2 days per part	20 hours self-study 8 remote training sessions
	ISTQB Exam (ISTQB 2018 Foundation Level)	3 days	Training Centre only
Phase 3	Assessment Gateway	Up to 1 week*	Training Centre only
Phase 4	End Point Assessment	3-5 days	Training Centre only

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

Skills Development Coach will conduct the induction in their first visit

Functional Skills

If required, learners will sit a Maths and/or 3 English exams. Allow 1-2 days per exam.

Testing Tools (ISTQB Foundation)

- Software testing objectives and purpose
- Defect, bugs, fault and failures
- Defect or Bug Life Cycle
- Principles of testing
- Fundamental test process
- Psychology of testing
- Software Quality
- Test analysis, design and Implementation
- Testing techniques
- Decision tables
- Testing types and techniques
- Test coverage
- Types of coverage
- Types of test tools
- Advantages and benefits of using testing tools
- Disadvantages and risks of testing tools
- Factors for software testing tool selection
- Proof-of-concept or piloting phase for tool evaluation



Testing Concepts (ISTQB Foundation)

- Verification and Validation
- Capability Maturity Model (CMM-Levels)
- Software Development Life Cycle
- Software Development Models
- Software Testing Levels
- Impact analysis
- Test design techniques
- Static test technique
- Informal reviews
- Formal reviews
- The roles and responsibilities of the moderator, author, scribe, reviewers and managers involved during a review
- Types of review
- Roles and responsibilities of a Test Leader
- Roles and responsibilities of a Tester
- Purpose and importance of test plans
- Estimation techniques
- Factors affecting test effort
- Test strategy
- Test monitoring
- Test control
- Configuration management
- Risks in software testing
- Risk analysis
- Incident management



Software Development Fundamentals C#

- Computer storage and data types
- Computer decision structures
- How to identify the appropriate method for handling repetition
- Error handling
- Algorithms and data structures
- The fundamentals of classes
- Inheritance
- Polymorphism
- Encapsulation
- Application Life Cycle management
- How to interpret application specifications
- Web page development
- Microsoft ASP.NET web application development
- Web hosting
- Web services
- Windows apps
- Console-based applications
- Windows Services
- Relational database management systems
- Database query methods
- Database connection methods



Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)
Preparation week to understand the four elements of the gateway.

Assessment Phase

- Summative Portfolio
- Synoptic Project
- Technical Interview with SME
- Employer Reference

Achievement of Apprenticeship

**BCS
Software Tester
(Level 4)**

Cyber Security Technologist (Level 4)



Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Network Principles
(3 Parts)



Cyber Security Introduction
(2 Parts)



Security Technology Building Blocks
(2 Parts)



Employment of Cryptography
(2 Parts)



Security Case Development & Design Good Practice
(2 Parts)



Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Apprenticeship Standard Cyber Security Technologist (Level 4)

Delivery breakdown

		Training Centre	Remote
Phase 1	Induction & Initial Assessment		Skills Coach visit
Phase 2	Network Principles Parts 1 - 3	3 days per part	Training Centre only
	Cyber Security Introduction Parts 1 - 2	5 days per part	20 hours self-study 10 remote training sessions
	Security Technology Building Blocks Parts 1 - 2	2 days per part	Training Centre only
	Employment of Cryptography Parts 1 - 2	2 days per part	20 hours self-study 4 remote training sessions
	Security Case Development & Design Good Practice Parts 1 - 2	2 days per part	20 hours self-study 4 remote training sessions
Phase 3	Assessment Gateway	Up to 1 week*	Training Centre only
Phase 4	End Point Assessment	3 - 5 days	Training Centre only

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

Skills Development Coach will conduct the induction in their first visit

Functional Skills

If required, learners will sit a Maths and/or 3 English exams.
Workshops can take up to 3 days.
Each exam takes up to 2 hours.

Employment of Cryptography

- Describe the main cryptographic techniques (e.g. symmetric, public key, secure hash, digital signing, block cipher etc) and explain how they are applied and to what end and their limitations
- Explain the significance of key management and the main features, benefits and limitations of symmetric and public key cryptosystems and the significance of entropy
- Describe the role of cryptographic techniques in a range of different systems and the practical issues introducing such into service and updating them
- Appreciate that there are legal issues relevant to cryptography in particular when crossing national borders
- Awareness of UK, EU and US export control of cryptography



Cyber Security Introduction

- Explain why information and cyber security is important to business and society
- Explain basic concepts: security, identity, confidentiality, integrity, availability, threat, vulnerability, risk & hazard
- Explain how the concepts of threat, hazard and vulnerability relate to each other and lead to risk
- Explain what penetration testing ('ethical hacking') is and how it contributes to assurance
- Applying basic security concepts to develop security requirements
- Describe some common vulnerabilities in computer networks and systems (for example, non-secure coding and unprotected networks)
- Describe the main different types of common attack techniques (for example: phishing, social engineering, malware, network interception, blended techniques e.g. 'advanced persistent threat', denial of service, theft)
- Describe Legal, standards, regulations and ethical standards relevant to cyber security



Security Case Development and Design Good Practice

- Describe what good practice in design is and how this may contribute to security
- Describe common security architectures that incorporate security hardware and software components
- Understand how to develop a 'security case', recognising that threats evolve and threats also respond to a security design



Security Technology Building Blocks

- Describe common types of security hardware and software which are used to protect systems (e.g. firewalls, encryption for data at rest, encryption for communication, IDS, IPS, IDAM tools, AV, web proxy, application firewalls, cross domain components, HSM, TPM, UTM)
- Explain how each may be used to deliver risk mitigation or implement a security case
- Understanding the benefits/limitations, and taking into account the implicit assurance (including supplier assurance and considering the benefits and risks of open source options) of the component, describing any residual risks



Networking & Digital Communications Theory

- Explain what is meant by data and protocol and how they relate to each other
- Describe an example data format and a simple protocol in current use (using protocol diagrams). Describe example failure modes in protocols
- Describe at least one approach to error control in a network
- Describe the main features of network protocols in widespread use on the Internet, their purpose and relationship to each other in a layered model
- Describe the main routing protocols in current use in computer networks and explain the differences between static and dynamic routing protocols and the pros and cons of each in different circumstances.
- Explain some of main factors that affect network performance and propose ways to improve performance



Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)
Preparation week to understand the four elements of the gateway.

Assessment Phase

- Summative Portfolio
- Synoptic Project
- Technical Interview with SME
- Employer Reference

Achievement of Apprenticeship

BCS
Cyber Security Technologist
(Level 4)

Data Analyst (Level 4)



Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Apprenticeship Standard Data Analyst (Level 4)

Delivery breakdown

Month		Time
Phase 1	Induction & Initial Assessment	1 day
	Pre-apprenticeship activities	
Phase 2	1. Foundation Math	1 day
	1. 2. Data Analyst Concepts	3 days
	2. 3. Data Analysis Concepts revision	1 day
	2. 4. Data Analysis Concepts exam	1 day
	3. 4. SQL Essentials	2 days
	3. 5. Power BI	2 days
	4. 6. R fundamentals, Stats and Exploratory Data Analysis	2 days
	4. 7. Hypothesis Testing	2 days
	5. 8. Advanced Analytics, Theory and Methods part 1	3 days
	5. 9. Advanced Analytics, Theory and Methods part 2	3 days
	6. 10. Advanced Analytics, Theory and Methods part 3	3 days
	6. 11. Advanced Analytics, Theory and Methods part 4	3 days
	7. 12. Advanced Analytics, Technologies and Tools part 1	2 days
	7. 13. Advanced Analytics Technologies and Tools part 2	2 days
	8. 14. Data Analyst Tools exam	3 days
	9. 15. Statistical Analysis Methods	VLE self-study
	10. 16. Opportunity for resists and portfolio wrap up	
Phase 3	11 - 13. Assessment Gateway	Up to 1 week*
Phase 4	14. End Point Assessment	3 - 5 days

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

- Introduction to programme
- Introduction to VLE
- Online Functional Skills assessments
- Cognassist assessment
- First VLE modules
- Vocational Score Card
- Initial learning activities

Functional Skills

If required, learners will sit a Maths and/or 3 English exams. Workshops can take up to 3 days. Each exam takes up to 2 hours.

Pre-apprenticeship activities

- Enrichment activities on the VLE

Foundation Math

- Essential mathematics skills to reach a minimum required standard for data analysis

Data Analyst Concepts

- Types of Data
- Structured and unstructured Data
- Introduction to Big Data
- The Data Life Cycle
- Requirements for data analysis
- Compliance & Audit Considerations
- Data Architecture
- Data Structures
- Database design, implementing and maintenance
- Good quality data
- DA process life cycle and tasks
- Domain context for DA

Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)
Preparation week to understand the four elements of the gateway.

SQL Essentials

- Creating DBs and tables
- Interrogating DBs - Select
- Using Joins

Power BI

- Loading, transforming, visualising data
- Using Power Query Editor in Power BI
- Modelling data
- Quick measures in PBI
- Building your own measures in PBI
- R scripts in PBI
- Mini projects

R Fundamentals, Stats and Exploratory Data Analysis

- Introduction to R
- Data structures in R
- Basic Stats in R
- Exploratory DA - visualisation tools

Hypothesis Testing

- Hypothesis testing
- Student's and
- Welch's t-test
- Wilcoxon test
- ANOVA

Advanced Analytics Theory and Methods (part 1)

- Unsupervised methods:**
- K-Means Clustering
 - Association Rules

EPA

The learner submits their portfolio and the employer reference is submitted.

Synoptic project

The learner will complete a synoptic project which is up to 40 hours in a controlled environment.

EPA interview

The learner will have an interview with an external assessor from BCS, the awarding body.

Advanced Analytics Theory and Methods (part 2)

- Supervised methods:**
- Linear Regression
 - Logistic Regression

Advanced Analytics Theory and Methods (part 3)

- Classification:**
- Decision Trees
 - Naïve Bayes Classifier

Advanced Analytics Theory and Methods (part 4)

- Time Series Analysis
- Text Analysis

Advanced Analytics Technologies and Tools (part 1)

- Technologies and Tools:**
- Analytics for Unstructured Data - MapReduce and Hadoop
 - The Hadoop Ecosystem

Advanced Analytics Technologies and Tools (part 2)

- In-database Analytics:**
- Advanced SQL and MADlib for In-database Analytics
 - Analytics Q&A

Statistical Analysis Methods

- Structural Equation Modelling
- Item Response Theory

Achievement of Apprenticeship

The learner will receive their grades and will have achieved a Level 4 Data Analyst Apprenticeship.

In addition to this, all BCS apprentices achieve RITTech status.

IS Business Analyst (Level 4)



Phase 1

Induction & Initial Assessment



Phase 2

Training modules and contact from Skills Development Coach



Business Analysis Foundation



Business Analysis Practice



Business Analysis Process Modelling



Business Analysis Requirements Engineering



Agile/
Professional Scrum Master



Phase 3

Assessment Gateway



Phase 4

End Point Assessment



Apprenticeship Standard IS Business Analyst (Level 4)

Blended Learning breakdown

		Training Centre	Remote
Phase 1	Induction & Initial Assessment	1 day	Training Centre only
Phase 2	Business Analysis Foundation	4 days	Training Centre only
	Business Analysis Practice	3 days	Training Centre only
	Business Analysis Process Modelling	3 days	Training Centre only
	Business Analysis Requirements Engineering	3 days	Training Centre only
	Agile/Professional Scrum Master	3 days	Training Centre only
Phase 3	Assessment Gateway	Up to 1 week*	Training Centre only
Phase 4	End Point Assessment	3 - 5 days	Training Centre only

*To be arranged by your Skills Development Coach

Course Details



Induction/Initial Assessment

1 day at our training centre. You will have an introduction to Estio and your entry to learning.

Functional Skills

If required, learners will sit a Maths and/or 3 English exams. Workshops can take up to 3 days. Each exam takes up to 2 hours.

Business Analysis Foundation

- What is business analysis?
- Competencies of a business analyst
- Strategy analysis
- Business analysis process model
- Investigation techniques
- Stakeholder analysis and management
- Modelling business processes
- Defining the solution
- Making a business and financial case
- Requirements Management
- Modelling requirements
- Delivering the requirements
- Delivering the business solution
- **Mock exam (optional)**
- **External examination (optional)**



Business Analysis Practice

- Rationale for Business Analysis
- Understanding the Strategic Context
- Understanding the Current Situation
- Stakeholder Analysis and Management
- Analysing and Modelling Business Activities
- Identifying Potential Solutions
- Building the Business Case
- **Mock exam (optional)**
- **External examination (optional)**



Business Analysis Process Modelling

- The role of business process modelling in describing how an organisation carries out its internal processes;
- the hierarchy of process models and techniques to describe them; and why this is a key skill of the business analyst in supporting change.
- Modelling core business processes at an organisational level.
- Modelling business processes at the process level, showing all the elements involved from triggering events to process endpoints.
- Documenting and analysing tasks.
- The use of gap analysis in improving business processes.
- **Mock exam (optional)**
- **External examination (optional)**



Business Analysis Requirements Engineering

- The Requirements Engineering framework: the issues and rationale in a business context; the application of the framework.
- The hierarchy of requirements.
- Roles and responsibilities of key stakeholders in the Requirements Engineering framework.
- Requirements elicitation.
- Requirements modelling.
- Requirements documentation.
- Requirements analysis.
- Requirements validation.
- Requirements management.
- **Mock exam (optional)**
- **External examination (optional)**



Agile/Professional Scrum Master

- Agile methodology
- The 12 principles of agile
- Understanding the use of Kanban boards.
- Scrum methodology
- Advantages of using scrum why is this the most popular Agile methodology
- **Mock exam (optional)**
- **External examination (optional)**



Assessment Gateway, Assessment Preparation & Administration Week

(Up to 1 week in the training centre)
Preparation week to understand the four elements of the gateway.

Assessment Phase

- **Summative Portfolio**
- **Synoptic Project**
- **Technical Interview with SME**
- **Employer Reference**

Achievement of Apprenticeship

BCS
IS Business Analyst
Apprenticeship
(Level 4)

With optional exams:
BCS International
Diploma in Business
Analysis
Scrum Alliance
Certified ScrumMaster

COURSE DETAILS

Apprenticeship Standard	Level	Programme Length	Awarding Body	Price	Qualifications	
					Mandatory	Optional
Digital Marketer	3	13 Months	BCS	£11,000	MTA 98 - 383 Introduction to Programming Using HTML and CSS BCS Marketing Principles BCS Digital Marketing Business Principles	Google Fundamentals of Digital Marketing Google Analytics IQ
Infrastructure Technician	3	13 months	BCS	£15,000	MTA 98-366 Networking Fundamentals MTA 98-368 Mobility and Devices Fundamentals BCS Business Processes BCS Coding & Logic	
Software Development Technician	3	13 months	BCS	£15,000	BCS Software Development Context & Methodologies BCS Programming	MTA 98-361 - Software Development Fundamentals C#
Network Engineer	4	15 months	BCS	£17,000	CompTIA Network+ BCS Network Systems and Architecture BCS Network Security	CompTIA Server+ CompTIA Security+
Software Developer	4	15 months	BCS	£18,000	BCS Systems Development Essentials BCS Software Language	MTA 98-361 - Software Development Fundamentals C# MTA 98 - 375 HTML5 Application Development Fundamentals
Software Tester	4	15 months	BCS	£18,000	ISTQB 2018 Foundation Level Certification (CTFL)	98-361 - MTA Software Development Fundamentals C#
Cyber Security Technologist	4	15 months	BCS	£18,000	BCS Network and Digital Communications Theory BCS Cyber Security Introduction BCS Security Technology Building Blocks BCS Employment of Cryptography BCS Security Case Development and Design Good Practice	CompTIA Network+ CompTIA Security+
Data Analyst	4	15 months	BCS	£15,000	BCS Data Analysis Concepts BCS Data Analysis Tools	
IS Business Analyst	4	15 months	BCS	£18,000		BCS Foundation Certificate in Business Analysis BCS Practitioner Certificate in Modelling Business Processes BCS Practitioner Certificate in Business Analysis Practice BCS Practitioner Certificate in Requirements Engineering BCS International Diploma in Business Analysis (Oral Exam) ScrumAlliance Certified Scrum Master

COST FOR OPTIONAL EXAMS:

MTA= £70

Server+ = £181

Network+ = £181

Security+ = £207

BCS International Diploma = £1035

ScrumAlliance = £150