



SKILLS BOOTCAMPS

SOFTWARE DEVELOPMENT



QA's learning programme comprises:

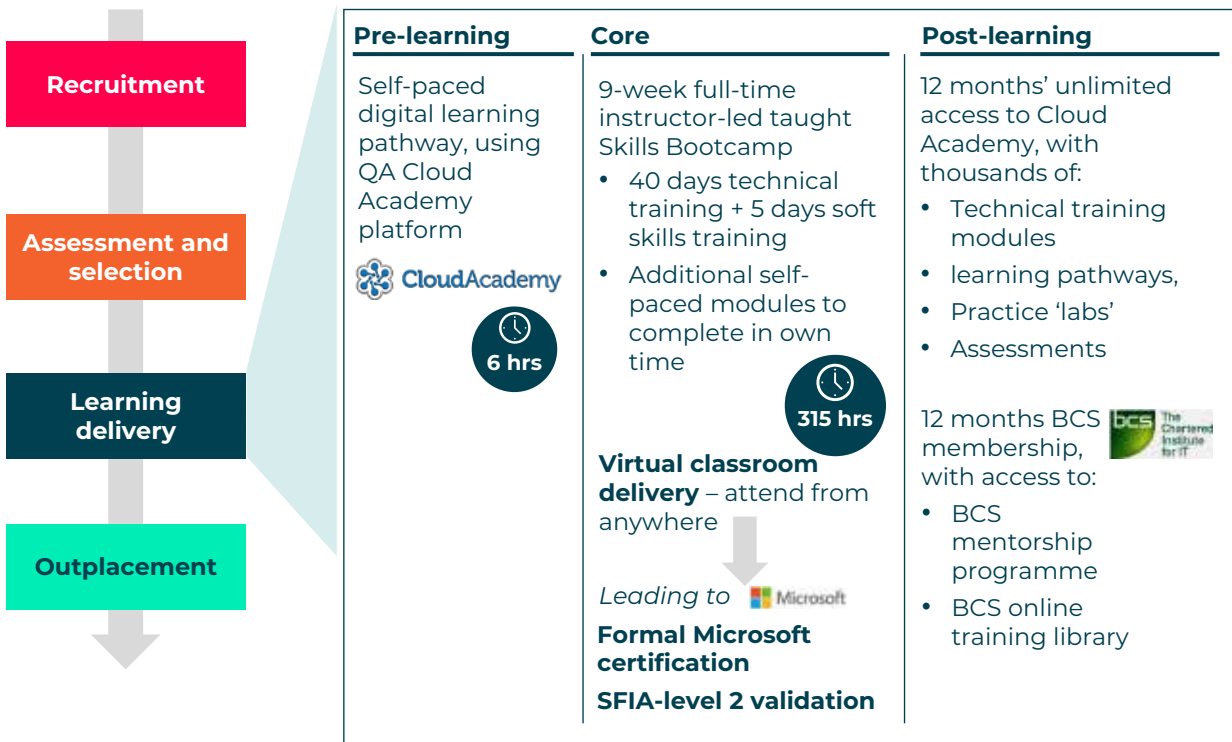
- A QA Cloud Academy self-paced pre-learning pathway
- 9-week, full time (35 hours per week) programme, using proven “QA Virtual Classroom”, allowing delegates to attend remotely or Covid – 19 permitted at one of QA's dedicated training centres.
 - 40-days technical training
 - 5 days soft skills training
 - Assignments completed in learners' own time

During the 9 weeks participants:

- Sit an industry-recognised exam leading to a Microsoft certification
- Undergo SFIA-benchmarked employer-led assessment
- PeopleCert Skills Bootcamp examination and certification

QA invites successful Applicants to participate in a programme of post-Skills Bootcamp learning in recognition of the value of life-long learning:

- Balance of 12-month access to ~10,000 hours content on QA's Cloud Academy
- 12-months BCS membership with access to Career Mentoring The programme structure
- 12-month discount to over 5000+ Microsoft & PeopleCert technology certifications



COURSE CONTENT

Cloud Academy Pre-Learning:

- Microsoft Azure fundamentals (AZ900)

Core content and schedule:

This Skills Bootcamp is aligned to the Software Developer Apprenticeship (Level 4) standard and learning outcomes.



Days	Module	Learning content
Technical Foundations		
1	Introduction	Onboarding Induction Requirements gathering Software development lifecycle?
2 - 3	Agile	Why agile Values and principals Scrum
4	DevOps and source control	What is DevOps? Introduction to Git Explaining architecture through CI/CD
5 - 6	Networking and Security	Network basics Local Area Networking OSI and TCP/IP Routing IP addresses Security 101
7	Operating system basics	OS basics Windows OS Introduction to Linux Command line
8 - 9	Database	Why we need databases? SQL fundamentals Working with data
10 - 14	Algorithm and scripting	Solving problems with code Python basics Writing scripts Use basic operators Understand precedence Primitive numeric and string data Classes and object references Debugging
15	AZ900 exam preparation	



Days	Module	Learning content
Specialist Pathway		
16 - 22	Programming fundamentals with Java	<ul style="list-style-type: none">What is JavaInstallationData typesPackagesNaming conventionFlow of controlClass membersOperatorsConditionalsIterationCommon data structuresString manipulationConstructorsAccess modifiersOOP principlesInterfacesType castingStatic and finalGarbage collectionWorking with inputsUnit testing with JunitTDD and BDD basicsPeer programmingReviewing code effectivelyDebugging code
23- 29	Intermediate Java and testing	<ul style="list-style-type: none">Using optionalsWorking in databases with JavaJDBC fundamentalsDealing with errorsSOLID principlesBest practices and design patternsComplex data setsUsing LoggingWorking with genericsLambda expressionsStreamsComplexity in codeInput and OutputWhat is mavenWorking with dependenciesGoals and phases in mavenVersioningPackaging Java applicationsIntroduction to testingTypes of testingFunctional testingV-modelUnit testingIntegration testingE2E testingIntroduction to mocking object with Mockito



Days	Module	Learning content
Specialist Pathway		
30 - 37	Building microservices with Spring boot	<ul style="list-style-type: none">Introduction to SpringMulti-tier architecturesBeans and scopesValidationDependency injectionComponentsConfigurationConnecting to a DB with SpringWorking with entitiesIntroduction to postmanUsing controllersBuilding business logic with servicesUsing data with repositoriesLombokSwaggerSpring profilesTesting a SpringBoot appCharacteristics of MicroservicesDesigning a system with MicroservicesConfigurationService DiscoveryResiliencyService routingEvent-driven architectureMessagingMessaging patternsBrokers, Queues and TopicsJMS configurationTopics, Partitions, and brokers
38 - 39	SFIA Project	
Day 40: SFIA assessment and Microsoft Fundamentals AZ900 exam		



SOFT SKILLS CONTENT

Days	Module	Learning content
1	Role overview and communication skills	Working in a technical role Key soft skills Importance of communication
2-3	Impactful presentations	Planning, preparing and structuring presentations Presenting with confidence Powerful visual aids Tackling difficult questions Controlling nerves
4	BCS Career Workshop	Careers in tech Preparing high-quality CVs (Dedicated workshop on individual learners' CVs)
5	BCS Interview Preparation	Preparing for technical interviews Presenting yourself effectively Asking questions



OPTIONAL POST-PROGRAMME

Participants are invited to further develop and embed their knowledge through:

1. Access to Cloud Academy

Balance of 12 months unlimited access to Cloud Academy (library of >2,500 digital learning assets) with signposting to training pathways pertinent to specialism.

2. BCS membership

Participants will be granted 12 months free BCS membership, providing:

- BCS' library of learning and careers support tools
- BCS' industry events, webinars, and reports
- BCS' mentorship scheme

3. PeopleCert Discounted Access

Participants will be given an access code for 12 months discounted access to PeopleCerts Ofqual regulated exams. Utilising Cloud Academy could obtain 25+ recognised certifications.

OUR PARTNERS



FOR MORE INFORMATION, PLEASE CONTACT

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