



SKILLS BOOTCAMPS

DEVOPS



QA's learning programme comprises:

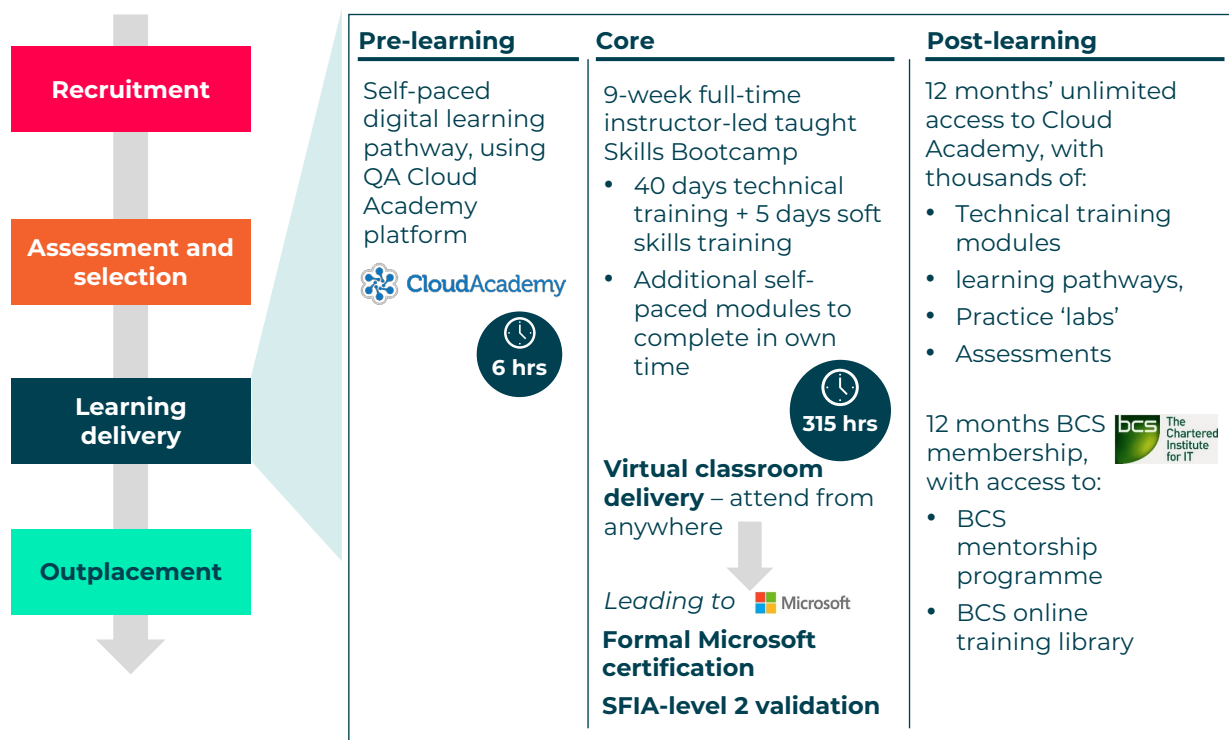
- A QA Cloud Academy self-paced pre-learning pathway
- 9-week, full time (35 hours per week) programme delivered in QA's state-of-the-art Manchester training centre (unless prevented by COVID-19 restrictions in which case QA will deliver using our proven remote learning solution)
 - 40-days technical 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



This Skills Bootcamp will provide each learner with at least 315 hours of instructor-led learning, plus additional self-paced learning.

COURSE CONTENT

Cloud Academy Pre-Learning:

- Python Fundamentals (3hrs)
 - Introduction to Python, algorithms and how they are used
- Cloud Literacy (3hrs)
 - What the cloud is, how it works, and important considerations

Core content and schedule:

This Skills Bootcamp is aligned to the DevOps Apprentice (Level 4) standard and learning outcomes.



Days	Module	Learning content
Days 1-15 Technical Foundations		
1	Introduction	Induction Onboarding Requirements gathering Software development life cycle
2 - 3	Agile	Why agile Values 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	Azure Fundamentals	Core cloud concepts AWS / Azure / GCP overview Exploring Microsoft Azure



Days	Module	Learning content
Days 16-40: DevOps Specialist Pathway		
16 - 20	Python and flask	Classes Attributes Working with functions Debugging Python apps OOP Unit testing Flask Introduction Flask routes Working with data Templating User input Using forms Validation Integration testing Gunicorn Bcrypt
21	Linux basics	User Administration Scripts File system access Managing system services
22 – 23	CI/CD basics	CI/CD overview Defining a CI pipeline Jenkins fundamentals Using Jenkins with build tools Create pipelines as code
24 - 26	Intermediate Linux	Aliases, functions and variables Ownership Data streams Pipes Filters Enterprise scripting Sudoers Managing system services Systemd Service configuration OpenSSH Screens in Linux
27 - 32	Intermediate CI/CD	Tools CD in the enterprise Environments and containers Infrastructure consistency Introduction to Jenkins Creating jobs in Jenkins Using builds effectively Freestyle projects Create pipelines as code Introducing NGINX Load balancing Running applications through your CI/CD pipeline Monitoring Quality assurance in practice



Days	Module	Learning content
Days 16-40: DevOps Specialist Pathway (cont.)		
33 - 36	Docker Containers	Installation Configurations Using images Containers Docker Networking Dockerfile Multi-stage builds Registry Bind mounts Volumes Compose introduction Docker compose CLI Compose configuration Kubernetes Orchestration
37 – 39	Project support	SFIA 2 Assessment 3 days of project work followed by a presentation on day 40

Day 40: SFIA assessment and Microsoft Azure 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.

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