SOFTWARE AND WEB DEVELOPMENT
ADVANCED TO HIGHER
APPRENTICESHIP
FROM GCSE-LEVEL TO FULLY-SKILLED DEVELOPER
There are lots of apprenticeship providers out there but we think we out-perform them all - here's some of the reasons why:

You will be earning while learning:

100% of QA apprentices have jobs from day one of their apprenticeship. Not only will you not have any university debt (an extra £27,000 in your pocket) you'll also be earning up to £250 per week.

Be at the cutting edge of it:

QA are at the forefront of IT and Business apprenticeships; we were the first to offer apprenticeships in Cyber Security, and Software & Web Development.

We're award winners and so are our apprentices:

We have won the coveted Learning Awards Apprenticeship Programme of the Year award twice and our apprentices have won the Microsoft Apprentice of the Year award 3 times in the last 5 years.
Rated Ofsted outstanding:

We are the first IT apprenticeships business to be rated 'Outstanding' by Ofsted in all 3 of the following categories: Outcomes for Learners; Quality of Teaching, Learning and Assessment; Leadership and Management.

Partnerships with leading global businesses:

We’re the leading apprenticeship provider for Microsoft, Oracle, Hewlett Packard Enterprise, and Cisco.

Proven career progression:

Our programmes are designed with progression routes built-in, which has led to 92% of QA apprentice graduates securing permanent employment after completing. That is 20% higher than the national average.
You should choose a career in Software and Web development if...

You have an interest in:

- IT
- Coding
- Analytical problem solving

Our Software and Web Development Advanced to Higher apprenticeship programme combines high-quality classroom training with on-the-job experience to develop your real world skills.

The programme gives you the qualifications, skills and technical grounding in the most popular technologies and programming languages. You can specialise in Java or C# so you gain skills relevant to the specific job role you secure.

This is the ‘pre-degree’ programme allowing you to progress onto a degree programme at the end of the Advanced to Higher apprenticeship.

Programme duration

Part 1 – Level 3 apprenticeship: 13-15 months
Part 2 – Level 4 apprenticeship: 18-24 months

After completing the Advanced to Higher apprenticeship you will gain Level 3 and Level 4 qualifications (equivalent to A level educational level and first year of degree study). If the apprenticeship isn’t right for you, you have the option to step off after the first year and still gain a Level 3 qualification (equivalent to A level educational level).

Approximately 12% of training takes place at a QA learning centre, with the remaining time being spent in the workplace.
What qualifications will I gain?

- Advanced Apprenticeship Software Development Technician L3 (equivalent to A level educational level)
- Oracle Certified Associate, Java SE 8 Programmer (Java track)
- Microsoft MTA Software Development Fundamentals (C# track)
- Higher Apprenticeship Software Developer L4 (equivalent to first year of degree study)
- BCS Systems Development Essentials

You can progress from GCSE to degree

QA’s apprenticeship programmes are designed with progression routes, from GCSE level right up to attaining a full degree, giving you the option to progress your career as far as you want.

After completing our Advanced to Higher apprenticeship, you can progress straight onto our Degree apprenticeship. On completing the Degree apprenticeship you will get a BSc (Hons) Degree in Digital and Technology Solutions from the University of Roehampton.
With QA’s Software and Web Development programme you could go on to become a...

- Software Developer
- Web Developer
- Junior Programmer
- Automated Test Developer

Entry requirements:

- You are aged 16-24
- You are passionate about a career in IT
- You have 7 GCSEs (C and above) or equivalent – including Maths and English

How is the programme structured?

The programme is made up of four components, ensuring you have a rounded, in-depth understanding of fundamental principles, techniques and technologies.

- Knowledge modules
- Portfolio
- Project
- Interview

1. Knowledge modules introduce you to IT theory, at a local QA Ofsted ‘Outstanding’ learning centre.
2. The portfolio showcases your work (from real work projects) to show the application of knowledge, skills and behaviours you have learnt.
3. The project allows you to apply your skills to solve a business-related problem.
4. Finally, an end-point assessment interview will assess the contents of your portfolio and project focusing on the standard of your work and how you have completed it.

Your QA Skills Coach will support you throughout your programme providing you with a single point of contact for any questions or help you need - including help developing your portfolio, adjusting to the world of work, and expert advice around the government’s Prevent Agenda and safeguarding.
PART 1 - CLASSROOM LEARNING

The first half of the Software and Web Development Advanced to Higher apprenticeship introduces you to the fundamental software development skills you need. It covers concepts on programming, systems and software development.

You will study the following modules in the classroom:

JAVA TRACK

<table>
<thead>
<tr>
<th>Module</th>
<th>Course</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Induction and Java Fundamentals</td>
<td>2 weeks</td>
</tr>
<tr>
<td>2</td>
<td>Intermediate Java</td>
<td>2 weeks</td>
</tr>
<tr>
<td>3</td>
<td>Web Fundamentals</td>
<td>1 week</td>
</tr>
<tr>
<td>4</td>
<td>JavaScript, JQuery &amp; AngularJS</td>
<td>1 week</td>
</tr>
<tr>
<td>5</td>
<td>MySQL &amp; Data Modelling</td>
<td>1 week</td>
</tr>
<tr>
<td>6</td>
<td>Systems Development Basics</td>
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C# TRACK

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<tbody>
<tr>
<td>1</td>
<td>Induction and C# Fundamentals</td>
<td>2 weeks</td>
</tr>
<tr>
<td>2</td>
<td>Intermediate C#</td>
<td>2 weeks</td>
</tr>
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<td>SQL &amp; Data Modelling</td>
<td>1 week</td>
</tr>
<tr>
<td>4</td>
<td>Web Fundamentals</td>
<td>1 week</td>
</tr>
<tr>
<td>5</td>
<td>ASP.NET MVC</td>
<td>1 week</td>
</tr>
<tr>
<td>6</td>
<td>Systems Development Basics</td>
<td>1 week</td>
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</table>
MODULES FOR JAVA TRACK

Induction and Java Fundamentals

- Understand and explore the different features of Java and their applications, including methods, classes and various operators within Java.
- Practise writing and testing simple Java programs.

Intermediate Java

- Build on your knowledge of Java by understanding more syntax and keywords and becoming confident using the language.
- Understand object orientation concepts such as inheritance, polymorphism and abstract classes.

You will complete a BCS assessment on programming at the end of this module.

JavaScript, JQuery & AngularJS

- Understand how the web works and the roles of JavaScript as well as the use of JQuery library and AngularJS framework.
- Create a basic website using JavaScript.

MODULES FOR C# TRACK

Induction and C# Fundamentals

- Understand and explore the different features of C#, the applications of each, syntax and the various operators within C#.
- Introduce the Visual Studio 2015 as the tool of choice for editing source code.

Intermediate C#

- Build on your knowledge of C# by understanding more syntax and keywords and becoming confident using the language.
- Understand object orientation concepts such as inheritance, polymorphism and abstract classes.

You will complete a BCS assessment on programming at the end of this module.

ASP.NET MVC

- Understand how the web works and how to develop web applications using ASP.NET MVC.
- Describe the different elements of the MVC pattern and how these combine to create web applications as well as building secure web applications.
MODULAE FOR BOTH THE C# AND JAVA TRACKS

**Web Fundamentals**
- Understand how the web works and the roles of JavaScript, cascading style sheets (CSS) and HTML and create a basic website using these three technologies.
- Discover more advanced markup languages, including XHTML and HTML5.

**SQL & Data Modelling**
- Learn SQL and MySQL syntax and setting up databases.
- Describe entities, the attributes that can be assigned to them and the relationships that can exist between them.
- Understand the concept of normalised and un-normalised data and be able to use standard notation to represent data sets as a logical data model.

**Systems Development Basics**
- Understand systems development lifecycles, requirements engineering, systems design, systems modelling and specification techniques.
- Understand how systems development applies within software development environment.

You will complete a BCS assessment on systems development at the end of this module.
This is a Level 3 and Level 4 programme and it is on a degree track. This offers you the opportunity to progress all the way to degree level. However, you and your employer have the option to ‘step off’ the programme if continuing to study onto the second part of the programme is not appropriate.

If you do step off, you will receive a Level 3 apprenticeship qualification – equivalent to A-level educational level.

All grades and credits remain valid, allowing you to resume training whenever you are ready, and gain further qualifications in the future should you choose to do so.
The second part of the Software and Web Development Advanced to Higher apprenticeship builds on the Level 3 content by advancing your foundation base of knowledge so you can work on more complex projects and prepare you to take on higher-level responsibility.

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<td>Test Driven Development</td>
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MODULES FOR JAVA TRACK

Induction and Advanced Java

• Use advanced features such as user interfaces using JavaFX, database access using Hibernate and design principles using SOLID principles.
• Understand advances in the OO Paradigm and functional programming with Lambda expressions.

MODULES FOR C# TRACK

Induction and Advanced C#

• Use advanced features such as design principles using SOLID principles.
• Understand advances in the OO Paradigm and functional programming with Lambda expressions.

MODULES FOR BOTH THE C# AND JAVA TRACKS

Test Driven Development

• Understand the principles of test-driven development, unit testing and the test-driven development lifecycle.
• Solve problems using test-driven development techniques and tools in addition to testing and evaluating solutions built using test-driven development.

Web Applications Development (Node.js)

• Understand advanced web application development concepts.
• Use node.js to create website components and use the Express web application framework in Node.js.

Maths and Algorithms

• Understand how to use iteration to study sequences and series, and solve algebraic equations symbolically, as well as how to study statistical properties of sets of numbers.
• Demonstrate a working knowledge of mathematical notation and the application of maths and algorithms in computing.
• Apply numerics, solutions of equations, mathematical approximation, numerical techniques and algorithms in computing.
**Systems Development**

- Understand the system development lifecycle and the role of stakeholders in defining deliverables and outcomes.
- Establish requirements for a new project and produce the required design specifications for the project. As well as plan and carry out an implementation project once development is complete.

You will complete a BCS Professional Certificate in Systems Development Essentials at the end of this module.

**Data Communications and Network Security**

- Understand the basics of data communications and networks.
- Understand data transmission, signalling, modulation, network protocols, architecture and network security.
SUPPORT FROM DAY ONE

A dedicated resourcer will be your point of contact when you first apply. They will give you all the information you need to know and will spend time getting to know you and your interests to make sure they match you up with the right role.

Once you have started your apprenticeship, a QA Skills Coach will visit you every 6-8 weeks to guide you through your apprenticeship plan, help you with your workplace units, teach you about the workplace environment and provide feedback for each unit. They will also be there as your point of contact for any questions or help you need — such as adjusting to the world of work, or help balancing your studies with work activity.

You will also meet a number of QA Tutors who are knowledge experts in their subject areas and will be delivering the theoretical/competency side of your apprenticeship programme in our QA training centres. They are on-hand to prepare you for assessments, mark them and provide you with feedback — supporting you for the end point assessment of your apprenticeship which will be a project and an interview.

Additional support from QA

Our team will also support you with:

- Managing your finances
- Updating your CV
- Applying for council housing, rents and mortgages
- Dealing with relationship problems
Find out more about our range of IT, Tech and Digital apprenticeships including Degree apprenticeships

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✉️ apprenticeships@qa.com