Computing, Digital and IT

Network Engineer Level 4 Apprenticeship

In Brief

Start Date / Duration

This apprenticeship programme can be started at any time. The duration of this apprenticeship is typically 24 months.

Entry Requirements

Individual employers will set the selection criteria which might include five GCSEs and/or A Levels; a Level 3 Apprenticeship; other relevant qualifications and experience; or an aptitude test with a focus on functional maths.

Please see our Apprenticeship vacancies for more information:

https://www.barnsley.ac.uk/our-departments/apprenticeships/apprenticeship-vacancies/

You will achieve

Network Engineer Level 4 Apprenticeship Standard

Course Overview

Want a successful career in IT? If so, look no further than our Network Engineer Apprenticeship.

The primary role of a network engineer is to design, install, maintain and support communication networks within an organisation or between organisations.

Network engineers need to maintain high levels of operation of communication networks in order to provide maximum performance and availability for their users, such as staff, clients, customers and suppliers. They will understand network configuration, cloud, network administration and monitoring tools, and be able to give technical advice and guidance.

This apprenticeship also concentrates on network design, advanced connectivity and advanced security and is perfect for those fresh out of an IT education or already employed in the tech sector looking to take the next step in their careers.

For further information regarding this apprenticeship standard please click here [https://www.instituteforapprenticeships.org/apprenticeship-standards/network-engineer/] .

Course Content

As a Network Engineer we will help you focus and train you for a highly successful career in IT. The Level 4 Network Engineer Apprenticeship introduces more advanced technical skills, developing knowledge to a higher level and covers an array of technical and academic competencies. Our face-to-face training workshops and online learning develops the core set of skills you must be able to do well to be competent in your role.

You will therefore need to understand and apply the principles of networking, protocols and associated technologies (specifically this includes the latest published versions of OSI layer model, IP, TCP/IP, routing and switching, WANs, LANs) as well as:

- Understand and apply the applied maths required to be a network engineer (e.g. algorithms, data, binary, probability and statistics).
- Understand the causes and consequences of system failure including load balance and storage protocols and responds appropriately.
- Understand the architecture of a typical business IT system, including hardware, OS, server, virtualisation, middleware and applications.
- Understand and responds to security threats, firewalls and vulnerabilities.

Technical knowledge and understanding underpinning this apprenticeship includes:

- Designing simple networks from a well-defined specification and apply appropriate security products and processes.
- Installing and configure network components, including switches, routers and firewalls.
- Optimising the performance of network systems and services.
- Monitoring, test and adjust network systems and performance to meet accepted standards using diagnostic tools, analysers and other equipment.
- Apply diagnostic tools and techniques to identify the causes of network performance issues.
- Apply structured approaches to troubleshooting network issues and repair faults in hardware, software products and the network.

You will also be required to undertake system upgrades to network hardware, software and operating systems, and:

- Integrating network related software into an existing network environment.
- Interpreting written requirements and technical specifications for network activities and maintaining accurate records of network maintenance activities.
- Log and respond to network service calls and provide technical network support to end users as required.
- Document work done in accordance with agreed procedures and operate within the parameters of service level agreements, standards and/or agreed response times.
- Show evidence of operating effectively in the business environment and responding to business issues related to network engineering.

How will I be assessed?

On-Programme Assessment will include a mixture of:

- Practical demonstrations
- Work based projects
- Written assessments
- A portfolio
- Observations
- An end point assessment

What Equipment Will I Need?

You will need to provide your own writing materials and a USB stick.

Where will I study?

You will study within the workplace and attend classes at Barnsley College SciTech Centre, Falcon Street, Barnsley S70 2EY.

What can I do next?

You can progress onto higher level degree and/or apprenticeship study or apply for a vast array of digital roles that include:

- Network Technician
- Network Engineer
- Systems Engineer
- Network Administrator

See what careers are available in the Computing [https://www.barnsley.ac.uk/app/uploads/2023/10/Computing-careers-2023-24.pdf] and Games [https://www.barnsley.ac.uk/app/uploads/2023/10/Games-Design-careers-2023-24.pdf] sectors. Use our online careers tool, Career Coach [https://barnsley.lightcastcc.com/?radius=&region=Barnsley] , to find out what your next steps could be.

How much does the course cost?

There is no cost to being an apprentice. All costs associated with your apprenticeship, including the cost of training and your salary, will be paid by your employer.

Financial support

You may be eligible for assistance with expenses such as travel, books, equipment and childcare. For further information please contact the Student Services Team on +44 (0)1226 216 267.

Extra information

Contact the Apprenticeship Team

For further information please contact the team on 01226 216166 or email: apprenticeships@barnsley.ac.uk [mailto:apprenticeships@barnsley.ac.uk]

Contact the Information Unit

For further information please contact our friendly Information Team on +44 (0)1226 216 123 or email info@barnsley.ac.uk [mailto:info@barnsley.ac.uk]

Want to join Barnsley Sports Academy and the Sports Village?

Barnsley College has a range of sports opportunities for all students to take part in, gain professional training and compete nationally and internationally. We also have a state-of-the-art fitness village, Honeywell Sports Village [https://www.barnsley.ac.uk/shops-services/honeywell-sports-village/] where students can make use of our fitness suite, spinning studio and classes for competitive rates. You don't have to be studying sport to get involved in the Sports Academy [https://www.barnsley.ac.uk/our-departments/sport/sports-academy/] .

Additional Learning Support

Our Additional Learning Support team can provide you with the support you need. Please contact them on +44 (0)1226 216 769.

English and Maths

Having good English and Maths qualifications are important for most careers and we want to give you the help you need to succeed.

If you are aged 16 – 19 and don't already have a grade C/4 or above in GCSE English and Maths they will automatically be included in your study programme. If you want to work towards higher grades in English and Maths we can help you do that too.

Need a higher level Maths qualification? We offer a Level 3 Mathematical Studies (Core Maths).

This can be added to your study programme.

If you need any further information, please contact our friendly Information Team.

Disclaimer

Please note we reserve the right to change details without notice. We apologise for any inconvenience this may cause.

Last updated: 11th December 2023

Want to apply?

Visit **https://www.barnsley.ac.uk/apply** to get started
Call us on **01226 216 123**