

Computing, Digital and IT

Computing and Systems Development Higher National Certificate (HNC) - (HTQ, subject to IfATE approval)

In Brief

Start Date / Duration

This course will start in September 2024 and lasts for one academic year. A typical timetable involves 11 hours of lessons across three days a week.

Entry Requirements

64 UCAS points from either subject-relevant A Level, T Level or BTEC equivalent qualifications or an Access to HE Diploma. You will also need GCSE English and Maths at grade C/4 or above.

We welcome applications from students with prior learning and/or previous experience. Evidence should be submitted through the application and interview process.

You will achieve

You will gain a HNC in Computing and Systems Development.

Course Overview

This is a contemporary, cutting-edge programme aimed at those who are eager to follow a career in various job roles within the high tech and ever-changing world of Software Development, Cybersecurity and Networking. Students on this programme will have a range of different backgrounds and interests meaning the programme will have a rounded approach to delivery and content.

Our course revolves around an everchanging industry of profession practice and techniques alongside ever-changing technology and computer advancements within the computing industry. We use up to date equipment and software, reflecting use within industry, and have a hand on practical approach to the course for certain pathways and practices. Our connections with clients across Barnsley allow us to sync our units with client briefs and needs to implement real work practice of what we learn in the classroom.

You will use industry standard equipment and technology; we have networking and data labs

equipped with testing tools, practice networking components and cables, programming software and computers to run testing and set up from and robotics components to build and programme. Utilising this practical approach to teaching in these areas allow for a hands-on learning environment where learning meets the needs of industry and new knowledge can be tested and visualised in a safe environment.

This course is subject to approval as an HTQ [<https://www.barnsley.ac.uk/courses/higher-technical-qualifications-htqs/>] by the Institute for Apprenticeships and Technical Education (IfATE).

Course Content

Having been developed in collaboration with employers to meet the needs of the growing demands of the industry. This HTQ provides the opportunity to gain the proper training, knowledge and skills to be successful in the workplace. Visit the HTQ page [<https://www.barnsley.ac.uk/courses/higher-technical-qualifications-htqs/>] for further information about this pathway.

You will study a broad range of topics to prepare you for your next steps, completing the following mandatory units:

- **Unit 1** – Programming
 - This unit introduces students to the core concepts of programming along with a introduction to algorithms and the characteristics of programming paradigms.
- **Unit 2** – Networking
 - The aim of this unit is to give students a wider background knowledge of computer networking essentials, how they operate, protocols, standards, security considerations and the prototypes associated with a range of networking technologies.
- **Unit 3** – Professional Practice
 - This unit covers the development of communication skills and communication literacy and the use of qualitative and quantitative data to demonstrate analysis, reasoning and critical thinking.
- **Unit 4** – Database Design
 - The aim of this unit is to give students opportunities to develop an understanding of the concepts and issues relating to database design and development. It will also provide the practical skills needed to be able to translate that understanding into the design and creation of complex databases.
- **Unit 5** – Security
 - The aim of this unit is to give students knowledge of security, the associated risks and how it has an impact on business continuity. Students will examine security measures involving access authorisation and regulation of use. They will implement contingency plans and devise security policies and procedures.
- **Unit 6** – Big Data (A Pearson set project)
 - The aim of this unit is to give students an opportunity to demonstrate the research skills required for developing a deeper understanding of a subject and the ability to use evidence to inform decisions. Students will undertake independent research, and investigation of a theme set by Pearson.
- **Unit 7** – Software development Life Cycles
 - The unit introduces students to lifecycle decision making at different stages of the software development process. They will examine various lifecycle models and learn to appreciate their particular characteristics in order to understand for which project environments they are most appropriate.
- **Unit 10** – Cyber Security

- This unit has been designed to develop students' knowledge and understanding in relation to cyber threats and vulnerabilities, cyber defence techniques and incident response. Students will explore fundamental principles as well as leading-edge concepts, terminologies, models, and hardening methods.
- **Unit 13 – Web Design and Development**
 - This unit introduces students to the underpinning services required to host, manage and access a secure website. Students will then be introduced to and explore the methods used by designers and developers to blend back-end technologies (serverside) with front-end technologies (client-side).

In addition, you will gain a wide range of sector knowledge tied to practical skills gained in research, self-study, directed study and workplace scenarios. You will also be given the opportunity to study units aligned to professional vendor qualifications and allow you, if you wish to apply after unit completion, to be assessed externally for the vendor qualification. This could be CISCO or Microsoft.

Please note that for 2023 academic year entrants this is a HNC which leads to a HTQ [<https://www.barnsley.ac.uk/courses/higher-technical-qualifications-htqs/>] at HND level only.



qualifications-htqs/]

[[https://www.barnsley.ac.uk/courses/higher-technical-](https://www.barnsley.ac.uk/courses/higher-technical-qualifications-htqs/)

How will I be assessed?

Specific assessment strategies include practical work, written assessments, examinations, case studies, presentations and reports offering the opportunity for students to demonstrate knowledge, understanding and application of both general and specific business principles. Such methods will also allow you to indicate both the breadth and depth of your directed and independent research.

Some modules are assessed partly using group activities as well as independent activities.

What Equipment Will I Need?

All equipment will be provided.

Where will I study?

SciTech Digital Innovation Centre
Falcon Street
Barnsley
S70 2EY

What can I do next?

Once you have achieved the HNC, you can progress to studying our Higher National Diploma in Computing and Systems Development [<https://www.barnsley.ac.uk/course/computing-and-systems-development-higher-national-diploma-hnd/>], which is recognised by Higher Education providers as meeting admission requirements to many Computing-related courses, for example: BSc (Hons) in Computing, BSc Data Science, BSc (Hons) Business Computer Systems, BEng (Hons) Software Engineering, BSc (Hons) Cyber Security and Forensic Computing.

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=®ion=Barnsley>], to find out what your next steps could be.

How much does the course cost?

Course fees: £5,995 per year for those that enrol in September 2024. £6,165* per year for those that enrol in September 2025 (*maximum fee per year is subject to approval)

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

Disability and Dyslexia Service (DDS) Higher Education

We offer a service to any student who has a diagnosis of anything persistent or long-term which might interfere with how they study and manage their day-to-day academic engagement. The service is flexible and shaped around the needs of each individual; it might be consistent support or intermittent support.

For further information please refer to our website. [<https://www.barnsley.ac.uk/higher->

education/dds-at-higher-education/]

HE Student Finance

As a Higher Education student living in England you may be eligible for the non-means tested Tuition Fee Loan from the Government. For further details go to:
www.direct.gov.uk/studentfinance [<http://www.direct.gov.uk/studentfinance>]

You may also be eligible for a Maintenance Loan. See the Government website [<https://www.gov.uk/student-finance>] for up-to-date details.

Students with children or dependant adults may qualify for a Childcare Grant or Adult Dependents' Grant. Students can apply for these at the same time as applying for a Maintenance Loan.

Remember: Eligible students will not have to pay tuition fees in advance and can apply for the Maintenance Loan before they start the course.

Apply online at www.direct.gov.uk/studentfinance [<http://www.direct.gov.uk/studentfinance>]

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.

Disclaimer

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

Last updated: 7th February 2024

Want to apply?

Visit <https://www.barnsley.ac.uk/apply> to get started

Call us on **01226 216 123**