

The background of the entire page is a complex, glowing green circuit board pattern on a dark background. The lines of the circuit are intricate and vary in thickness, creating a sense of depth and technology.

NELSON & COLNE  
COLLEGE GROUP

UNIVERSITY CENTRE

A small white diamond shape is positioned above the word 'extraordinary' in the main headline.

Be  
**extraordinary.**

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COMPUTING

SECTOR GUIDE

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# Welcome to Computing

## Are you ready to develop your expertise in the digital and tech industry?

This last year has seen the world turn virtual, with industry calling it the digital tech boom of 2020 with most businesses, leisure and educational activities going online. This has resulted in a major shift in the demand for jobs. The digital economy employs 2.98m people, which has increased by 11% in the past two years. If this growth continues there will be a total of 100,000 job openings a month before the end of the year.

If you currently work in this sector or are looking to start your career, our programmes are designed with the industry in mind. The tech world is continually growing, with new innovative trends that will reshape the way we live. From artificial intelligence to robotic process automation and cyber security, learn from our expert lecturers with industry experience.

**Cyber security jobs  
are growing three  
times faster than  
other tech jobs.**

**UK tech  
companies aligned  
to United Nations  
Sustainable Development  
Goals have raised  
£2.2bn over the last  
6 years, the highest  
in Europe.**



# Why Us?

**Our University Centre is the only provider in the region and one in five in the UK to offer Higher Level computing courses with a focus on sustainability.**

The unique qualifications will give you the edge when applying for jobs in the industry and prepare you for the change in consumers and government attitudes towards a sustainable future.

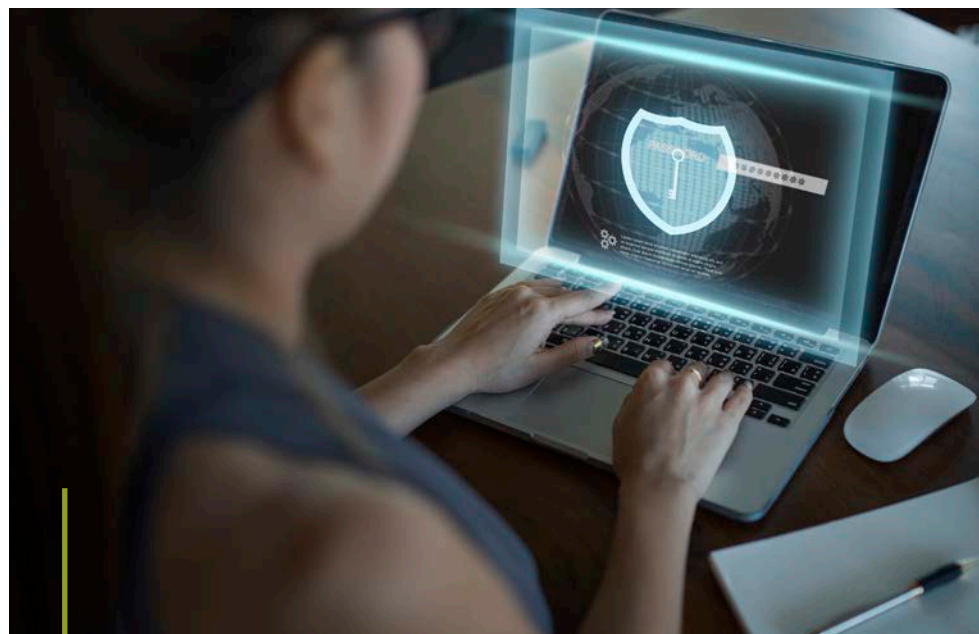
Combine this with our high-quality teaching and expert lecturers with in-depth sector knowledge, our programmes will get you industry ready. Invest in your future with our flexible programmes that are designed to work around your current home life. You can learn now, pay later with Student Finance, and fast-track your career.





# Fast-track your career

In 2019, the North West tech industry had a total of £600million venture capital invested and UK tech employment grew by 40% in the last 2 years, now accounting for 9% of the national workforce with 2.93m jobs created. A job in this sector is not only highly-skilled, well paid and valued by all types of businesses; it is also fascinating and fulfilling.



Protect IT infrastructure, monitor networks and systems, become a **Cyber Security Analyst**.

You will:

- Earn between £25k - £70k depending on your experience
- Research and evaluate cyber security threats
- Plan for disaster recovery and create contingency plans
- Design new security systems or upgrade existing ones



Lead a team of people, manage day to day operations, become an **Information Systems Manager**.

You will:

- Earn between £40k - £65k
- Research and install new systems and networks
- Implement technology, directing the work of your team
- Oversee upgrades and security backups of hardware and software systems



Provide maximum performance connecting users, become a **Network Engineer**.

You will:

- Earn up to £70k as a salaried employer or £500 per day as a contractor
- Establish a networking environment by designing system configuration
- Maximise network performance
- Undertake data network fault investigations

Job **stability**, constant demand within the sector



Work **anywhere**, from home or in the office



**International** job opportunities



# Industry Partnerships

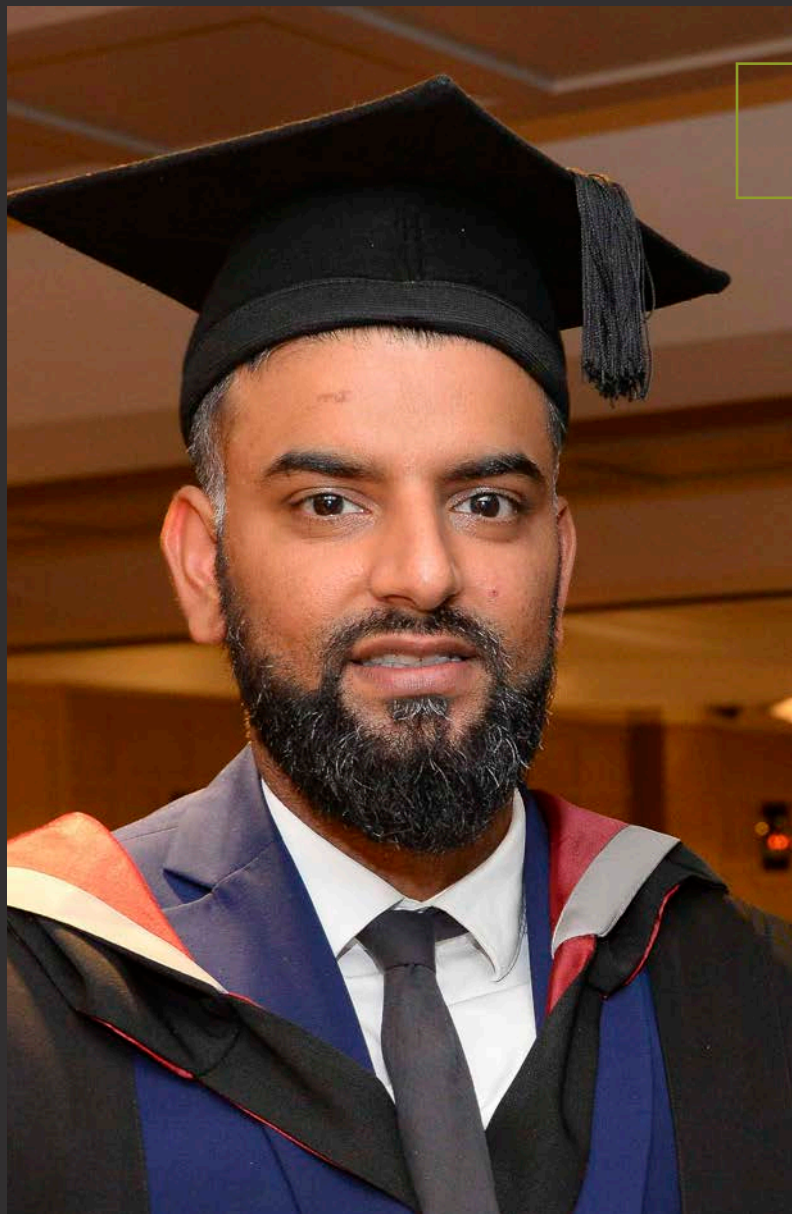
**Our academics work with industry leaders from across Lancashire who help us shape our programmes.**

Employer partners help us design our qualifications for the industry by addressing any current skills gaps and factoring in future market trends. Students will not only gain an advantage from having tailored qualifications designed for the market, but they can also take advantage of their expertise with guest lecturing and visits to industry workplaces.





# Our Experts



**Shakoor Ghafoor**  
Programme Leader  
for Computing

"Computing and software development has always been my main interest. I have a Computing degree, and later attained a PGCE to share my knowledge and experience.

"I have been a Computing lecturer for over eight years now, ranging from Levels 3 to 5, and have had proactive involvement in curriculum design and development of HE programmes. We use local and national labour market information to inform our curriculum, ensuring that students receive an industry-relevant education for in-demand careers.

"We have fantastic Computing facilities at our University Centre, with up-to-date IT suites and industry software to support your learning. There are study areas dedicated exclusively to HE learners and you can benefit from our extensive employer links.

"Outside the classroom, my experience includes the development of my own mobile application, which has been designed and implemented by local and national driving schools and launched on both Apple and Android."

**"Outside the classroom, my experience includes the development of my own mobile application, which has been designed and implemented by local and national driving schools."**

# Our Graduates

Our students' aspirations and life situations are unique to them and their journey. We have professionals looking to upskill, mature adults looking for a better career and young adults finishing college and looking to take their next step on their educational journey. Our programmes are designed flexibly so that they are attainable for all.



**Finn MacAdam**

Studied:  
**HNC in Computing**

Where now:  
**Gained employment as a  
Service Desk Analyst at QA Scheme  
Support Services (QASSS) Ltd**



# Qualifications designed for industry

Do you currently work in the digital and tech industry? Or maybe you're looking to start your career or retrain? Our programmes can prepare you for Net Zero with the UK becoming the first major economy to pass the Net Zero emissions law. The new target will require the UK to bring all greenhouse gas emissions to Net Zero by 2050.

For the tech industry, this means creating new innovative ways the world uses energy; and how digital and tech can support this. Our programmes factor in sustainability to prepare you for this new emerging policy, that will overhaul the way we live.

Our qualifications are also designed to suit you. We offer flexible delivery and tailored study packages, so you can study while you work, fit learning around your family life or take things at your own pace. Explore our programmes, pick your niche and fast-track your career – it's time to invest in you.

**95 IT companies valued at \$250-\$800m in the UK in 2019, a 27% increase from 2018.**





A record £10.1bn was invested into UK tech companies in 2019.

LEVEL 7	<b>Postgraduate (MEng, MA, MSc)</b> This is a Level 7 qualification for those wishing to expand their knowledge beyond Bachelor's level, with the opportunity to study specialist modules.		<b>Degree and Higher Level Apprenticeship</b> This type of study includes working while studying part-time; qualifications can range from Level 4 HNCs with progression onto Higher Level qualifications up to Level 7.
LEVEL 6	<b>Bachelor Degree (BA, BEng, BSc)</b> This is a full degree programme leading to a qualification such as a Bachelor of Arts (BA), Bachelor of Science (BSc) or Bachelor of Engineering (BEng); commonly known as undergraduate degrees.	<b>Bachelor (BA, BEng, BSc) Top-up Degree</b> This is a one year programme, that gives those students with a Level 5 qualification to top-up and gain an Honours Degree	
LEVEL 5		<b>Foundation Degree (Fd, Fda, FdSc)</b> This qualification is a Level 5 award, usually over two years (full-time). Students can then progress on to a top-up to graduate with an Honours Degree.	
LEVEL 4		<b>Higher National Diploma (HND)</b> A Level 5 qualification, that allows you to progress onto a top-up degree qualification and is usually studied over two years.	
		<b>Higher National Certificate (HNC)</b> A Level 4 qualification, that allows you to top-up with an HND qualification and is usually studied over one year.	
LEVEL 3	<b>Foundation Year</b> This programme adds one year to a Foundation/Bachelors degree. This gives students who do not have the entry requirements or prior industry experience to enrol on a Higher Level programme the opportunity to still work towards a Degree Level qualification.	<b>Access to Higher Education</b> This is a one year programme that acts as a stepping stone to Degree Level study. This gives students who do not have the entry requirements or prior industry experience chance to enrol on a Higher Level programme.	

# Qualifications Explained



# Our Courses

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The UK is 3rd in the world for tech unicorns behind only the US and China, with 77 companies valued at over \$1bn.





UCAS Code **COMP**  
Location **Nelson Campus**  
Length **1 year full-time or 2 years part-time**

**HNC**  
Subject to Validation

# Computing

The world of computing continues to grow at a rapid rate. Why not get ready for the ever-evolving industry and future proof your career with a Higher National Certificate in Computing? Our programme will provide you with the skills, knowledge and techniques to become an expert professional in the computing field.

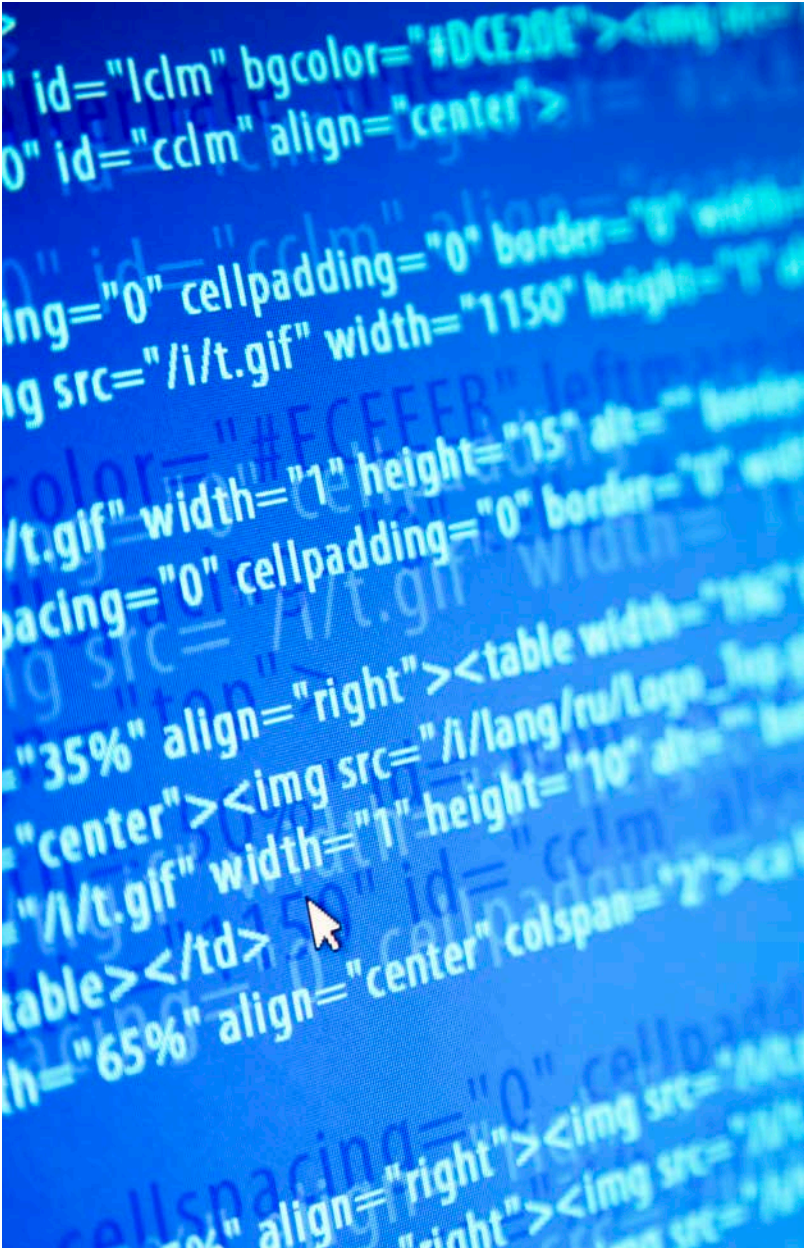
- What will I study?**  
You will study five core modules:
- Computing project
  - Database design and implementation
  - Networking security
  - Programming and software development
  - The computing professional

- Then you will select an additional one module from the following options:
- Computer systems architecture
  - Website and e-commerce development
  - Data analytics

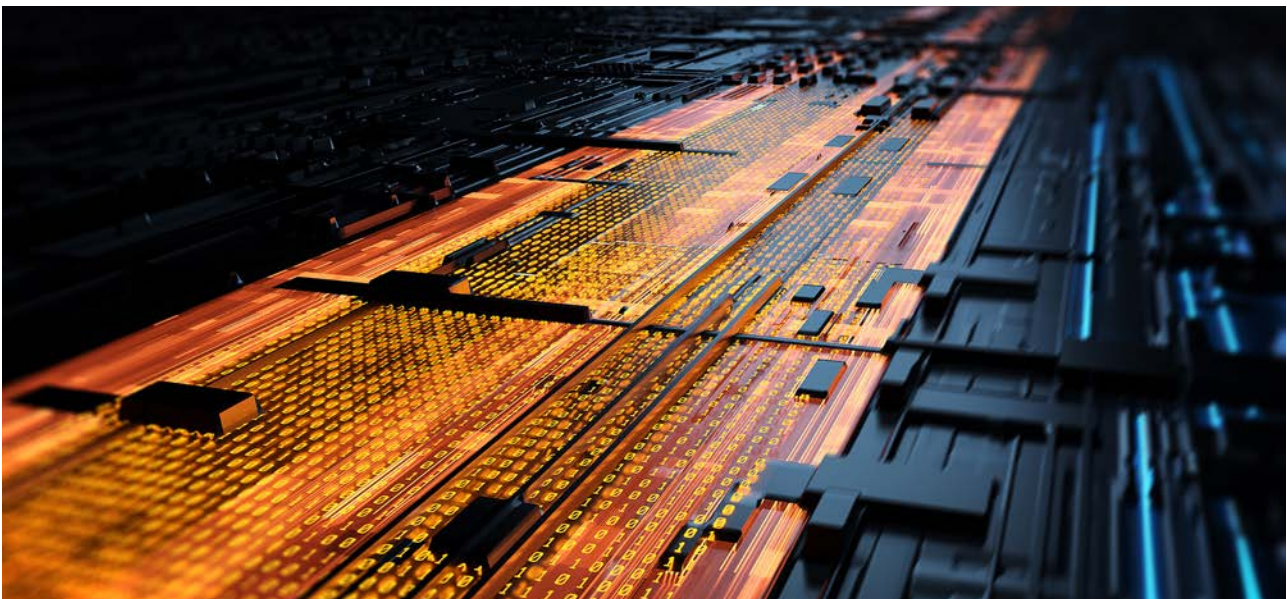
**How will the course be assessed?**  
A series of written and practical work is assessed by your lecturers and will determine your overall grade.

**Progression**  
On completion of the Higher National Certificate, you can go on to study a FdSc or find employment within the sector. See how you can progress on page 15.

**Entry requirements**  
This is assessed on an individual basis. See page 26 for more details.



UCAS Code **FCOM**  
Location **Nelson Campus**  
Length **2 years full-time or 4 years part-time**



**FdSc**  
Subject to Validation

# Computing

Are you looking to start your career in computing? Or maybe you are looking to upskill? Our Foundation Degree is designed to develop your skills and knowledge to become a leading professional in whichever field you wish to pursue. Whether that is software, systems architecture, programming or website development; this course is designed with the industry in mind to get you career-ready on the path you wish to pursue.

- What will I study?**  
In year one, you will study five core modules:
- Computing project
  - Database design and implementation
  - Networking security
  - Programming and software development
  - The computing professional
- Then you will select an additional one module from the following options:
- Computer systems architecture
  - Website and e-commerce development
  - Data analytics
- In year two, you will study one core module:
- Work-based learning project
- Then you will select an additional five modules from the following options:
- Cloud computing and programming
  - Data structures and algorithms
  - Operating systems design and security
  - Games design and development
  - Data analytics and informatics
  - Cryptography, security and forensics
- Network design, implementation and management
  - Machine learning and artificial intelligence
  - Human computer interaction and interface design
  - Data mining and knowledge acquisition
- How will the course be assessed?**  
A series of written and practical work is assessed by your lecturers and will determine your overall grade.
- Progression**  
On completion of the Higher National Certificate, you can go on to study a Foundation Degree or find employment within the sector. Students completing our HNC who progress to one of our Foundation Degrees listed here will enter at Level 5 rather than Level 4. This will shorten the FdSc to one year full-time or two years part-time. See how you can progress on page 15.
- Entry requirements**  
This is assessed on an individual basis. See page 26 for more details.





UCAS Code **FCSN**  
Location **Nelson Campus**  
Length **2 years full-time or 4 years part-time**

**FdSc**  
Subject to Validation

# Cyber Security and Networking

Today’s society relies heavily on technology, from governments to businesses. As a whole, we are becoming increasingly dependent on the internet to provide key services. This has resulted in cybercrime and the need for organisations to invest heavily in specialists to combat the threat. Our Foundation Degree will not only prepare you for your career but also enhance your knowledge and skills in cybercrime and information security management, getting you career-ready for a job in a growing field.



**What will I study?**  
In year one, you will study five core modules:

- Computing project
- Database design and implementation
- Networking security
- Programming and software development
- The computing professional

Then you will select an additional one module from the following options:

- Computer systems architecture
- Website and e-commerce development
- Data analytics

In year two, you will study four core modules:

- Machine learning and artificial intelligence
- Games design
- Human computer interaction and interface design
- Data mining and knowledge acquisition

**How will the course be assessed?**  
A series of written and practical work is assessed by your lecturers and will determine your overall grade.

**Progression**  
On completion of the Foundation Degree, you can go on to study a top-up or find employment within the sector. See how you can progress on page 15.

**Entry requirements**  
This is assessed on an individual basis. See page 26 for more details.



UCAS Code **FCPR**  
Location **Nelson Campus**  
Length **2 years full-time or 4 years part-time**

**FdSc**  
Subject to Validation

# Computer Programming

Are you ready to harness the power of computer programming? This career is more important today than ever before, due to technological advances in today’s world; with the need for automation and computer accuracy, we use programming to harness that computing power. This programme is designed to develop your skills in this area. To give you the knowledge and expertise needed to become an expert in your profession.

**What will I study?**  
In year 1, you will study five core modules:

- Computing project
- Database design and implementation
- Networking security
- Programming and software development
- The computing professional

Then you will select an additional one module from the following options:

- Computer systems architecture
- Website and e-commerce development
- Data analytics

In year two, you will study five core modules:

- Data structures and algorithms
- Operating systems design and security
- Games design and development

Then you will select an additional one module from the following options:

- Data analytics and informatics
- Cryptography, security and forensics
- Network design, implementation and management
- Machine learning and artificial intelligence
- Human computer interaction and interface design
- Data mining and knowledge acquisition





**FdSc**  
Subject to Validation

# Computer Information Systems

The world is changing, with new technological developments changing the way we live. Online information and how we store it has never been more important. This programme will give you the knowledge and skills needed to develop systems for managing information. With IT skills in higher demand more than ever before, this course will give you the professional attributes needed to thrive as an expert in this field.

**What will I study?**

In year 1, you will study five core modules:

- Computing project
- Database design and implementation
- Networking security
- Programming and software development
- The computing professional

Then you will select an additional one module from the following options:

- Computer systems architecture
- Website and e-commerce development
- Data analytics

In year 2, you will study four core modules:

- Data analytics and informatics
- Work-based learning project

- Data structures and algorithms
- Data mining and knowledge acquisition

Then you will select an additional two modules from the following options:

- Cloud computing and programming
- Operating systems design and security
- Cryptography, security and forensics
- Network design, implementation and management
- Machine learning and artificial intelligence
- Games design
- Human computer interaction and interface design

**How will the course be assessed?**

A series of written and practical work is assessed by your lecturers and will determine your overall grade.

**Progression**

On completion of the Foundation Degree, you can go on to study a top-up degree or find employment within the sector. See how you can progress on page 15.

**Entry requirements**

This is assessed on an individual basis. See page 26 for more details.



The UK is Europe's top scaling tech nation and is increasing its lead in the world.





# How to apply

How you apply depends on the route of study you intend to take. Whether you are considering full-time or part-time study, applying is easy. Simply follow the steps below:

## Part-time Study

To apply for a part-time course and teacher training please complete our Higher Education application form which is available at [universitycentre.nelsongroup.ac.uk](http://universitycentre.nelsongroup.ac.uk).

## Full-time Study

Applicants for full-time undergraduate courses should apply through UCAS. The online application form and guidance notes are available on the UCAS website at: [www.ucas.com](http://www.ucas.com). If you need help with this process, contact our **Admissions Team** by email: [he@nelsongroup.ac.uk](mailto:he@nelsongroup.ac.uk) or by telephone: **01254 354047**

## Higher Level Apprenticeships

To apply for a Higher Level Apprenticeship, please contact our Apprenticeship Team on **0333 003 1717** or [he@nelsongroup.ac.uk](mailto:he@nelsongroup.ac.uk)

## After you've applied

You may be invited to an informal interview with our expert lecturers who can answer any questions you may have about our programmes. It is a great chance to look around and see our facilities too.

## Talk to Us

If you have a question, get in touch, we can help.

Live Chat: [universitycentre.nelsongroup.ac.uk](http://universitycentre.nelsongroup.ac.uk)

Email: [he@nelsongroup.ac.uk](mailto:he@nelsongroup.ac.uk)

Telephone: **01254 354117** or **01254 354047**



## Entry Requirements

Each course has its individual entry requirements depending on the level of study you are applying for.

Further information about particular course entry requirements can be found on our website [universitycentre.nelsongroup.ac.uk](http://universitycentre.nelsongroup.ac.uk) or you can contact our Admissions Team at [he@nelsongroup.ac.uk](mailto:he@nelsongroup.ac.uk) or by telephone: 01254 354047 or 01254 354117.

Generally, if you are applying for a HNC, Foundation Degree or BA (Hons), the entry requirement is a Level 3 qualification with

GCSE Maths and English or equivalent. If you are applying for an HND, the entry requirement is a relevant HNC.

We welcome and encourage applications from mature students who may not meet the traditional entry requirements. We will take into account your motivation, ability, industrial experience and educational background.

## Get help with your fees and finance

There are a number of options available to support students through their university studies.

### Tuition Fees

Our University Centre fees are lower than traditional universities and with the additional savings of living at home, that's even more reason to study at one of our campuses.

If you are planning to study a University Centre qualification and are not self-funding the course, you are eligible to apply for tuition fee funding via Student Finance England. The Tuition Fee Loan doesn't have to be paid back until your income is over the current UK repayment threshold of £26,575\* a year.

Tuition fee loans are available for both full-time and part-time study

### Maintenance Loan

If you are studying full-time or part-time, you may be eligible for a Maintenance Loan to help with living costs. This is dependent upon your household income.

### Childcare Grant (CCG)

If you are studying full-time, you might also be able to apply for a CCG, which helps with childcare costs. This is dependent upon your household income.

Further details can be found on [www.gov.uk/studentfinance](http://www.gov.uk/studentfinance) or by contacting the HE Office on [HE@nelsongroup.ac.uk](mailto:HE@nelsongroup.ac.uk) or 01254 354047.

### Access to Higher Education Financial Support

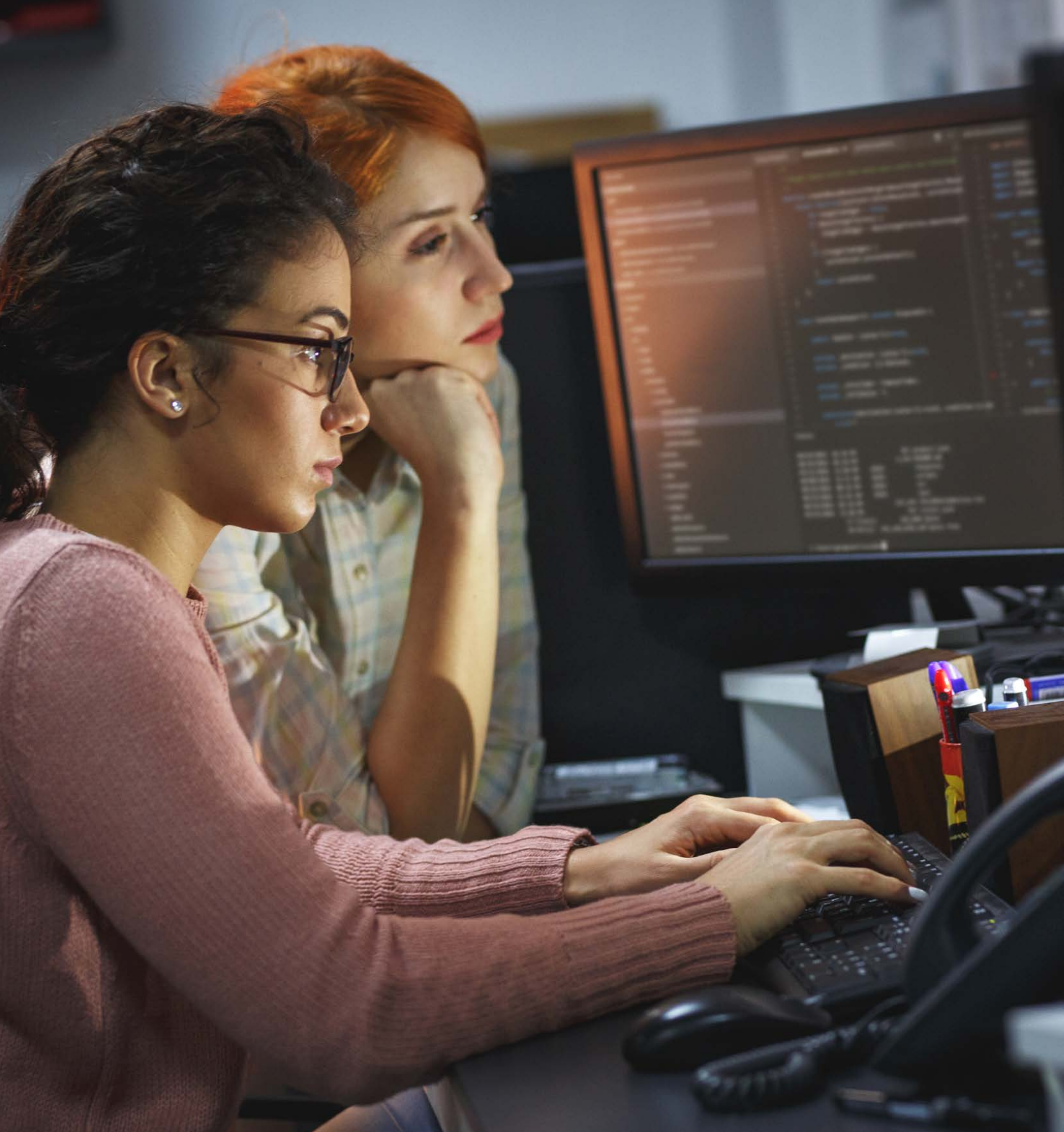
Access to Higher Education Diploma courses may be FREE with an Advanced Learner Loan! Loans may be reclaimed

upon completion of a degree. Financial support may also be available for students to support with course related fees. Please note that for the Access to University Diploma this is only reimbursed upon completion of your chosen degree course. The fully-funded programme route is for those aged 19-24 who are aiming to complete their first full Level 3 qualification.

### Advanced Learner Loan

If you are looking to study a course at Level 3 or above and are not eligible for this to be funded, an Advanced Learner Loan may be an option to pay your course fees.

Loan repayments are linked to what you earn when you have finished your course, not how much you borrowed. You only need to start paying back your Advanced Learner Loan when you are earning over the repayment threshold. For more information on the Advanced Learner Loan visit [www.gov.uk/advanced-learner-loan/overview](http://www.gov.uk/advanced-learner-loan/overview) If you wish to apply for an Advanced Learner Loan, loan applications can be made when you enrol. You will need a valid UK passport or birth certificate (the application takes longer to process if you do not have a passport). You will also need information from College to complete the loan application – this will be provided at your assessment.



\*correct as of March 2021



Part of the

NELSON & COLNE  
COLLEGE

GROUP

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