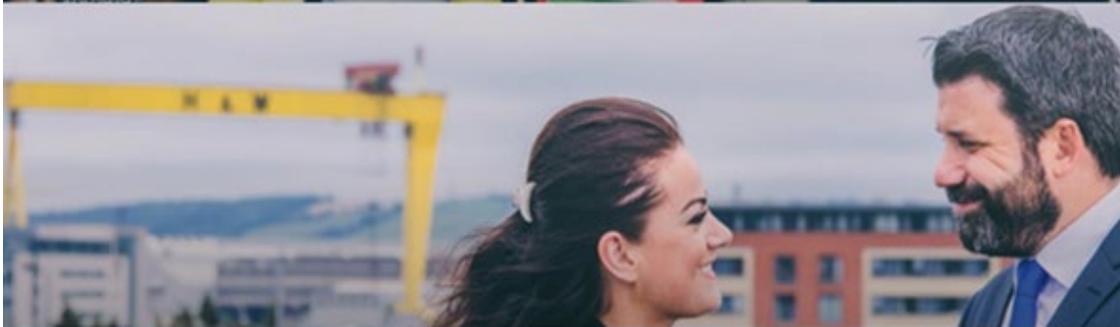




Level 3 IT Apprenticeships

Overview

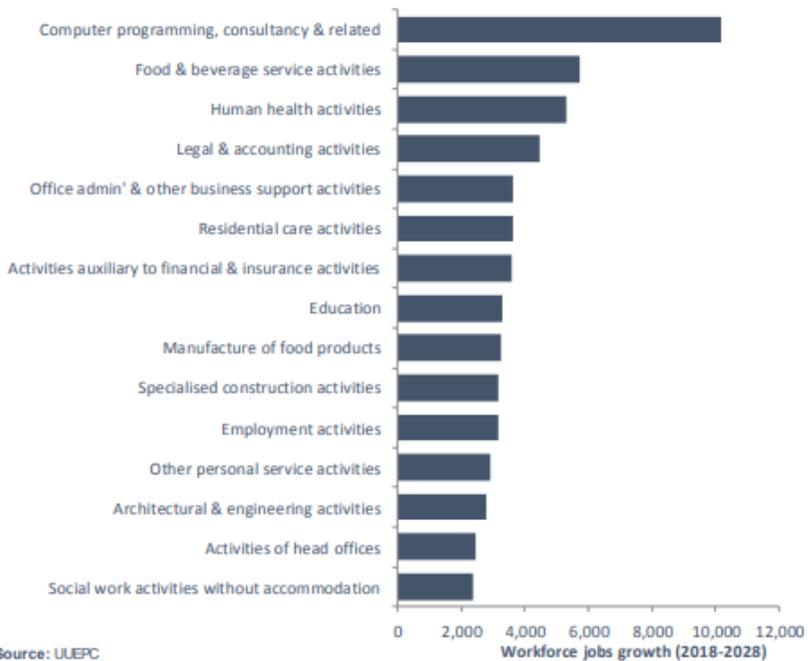
2022-2023



Overview of Belfast Met Level 3 IT Level Apprenticeships

Belfast Met offers two A-Level equivalent Level 3 IT Apprenticeship programmes at the Castlereagh Campus. These programmes align themselves to research carried out on the economic and technical future of Northern Ireland over the next ten years. Research by the Northern Ireland Skills Barometer in July 2019 has indicated that there could a shortfall of up to 11,360 skilled IT workers in Northern Ireland by 2028.

Figure 2.2: Workforce jobs growth, top 15 2 digit SIC (2018-28)



The Northern Ireland Digital Matrix Report of 2016 (<http://matrixni.org/reports/2016-digital-ict/>) proposed the following opportunities for Northern Ireland within the digital arena.

Opportunities for Northern Ireland

- **Advanced networking:** the increased capability to move large amounts of data anywhere, quickly and reliably changes where economic activity is located.
- **Applications:** more sophisticated applications are replacing human activity in lower-skilled ICT work.
- **Data analytics:** understanding of transactional data can lead to changes in the location of business functions, from manufacturing to provision of IT services; and automation of data analysis changes the pattern and location of business processes.
- **Cyber security:** as organisations rely increasingly on networks and cloud-based services running on virtualised infrastructure, securing data becomes harder.
- **New ICT service models:** the rise of cloud-based applications mean that IT services are no longer delivered from data centres close to the point of use, and sometimes from unknown locations.

The two, Level 3 IT Apprenticeship programmes aim to cover all of the areas identified in the NI Digital Matrix report. The programmes specialize in the following areas:-

- Networking Infrastructure
- Software Development

These programmes also have natural progression routes to the following Higher Level Apprenticeship (HLA) programmes also offered at Belfast Metropolitan College:-

- HLA in Cyber Security & Networking Infrastructure
- HLA in Software, Cloud & Application Development

Apprenticeship Overview

An apprentice will be a new or existing employee, in a Northern Ireland-based company, working with experienced staff to learn and develop their skills.

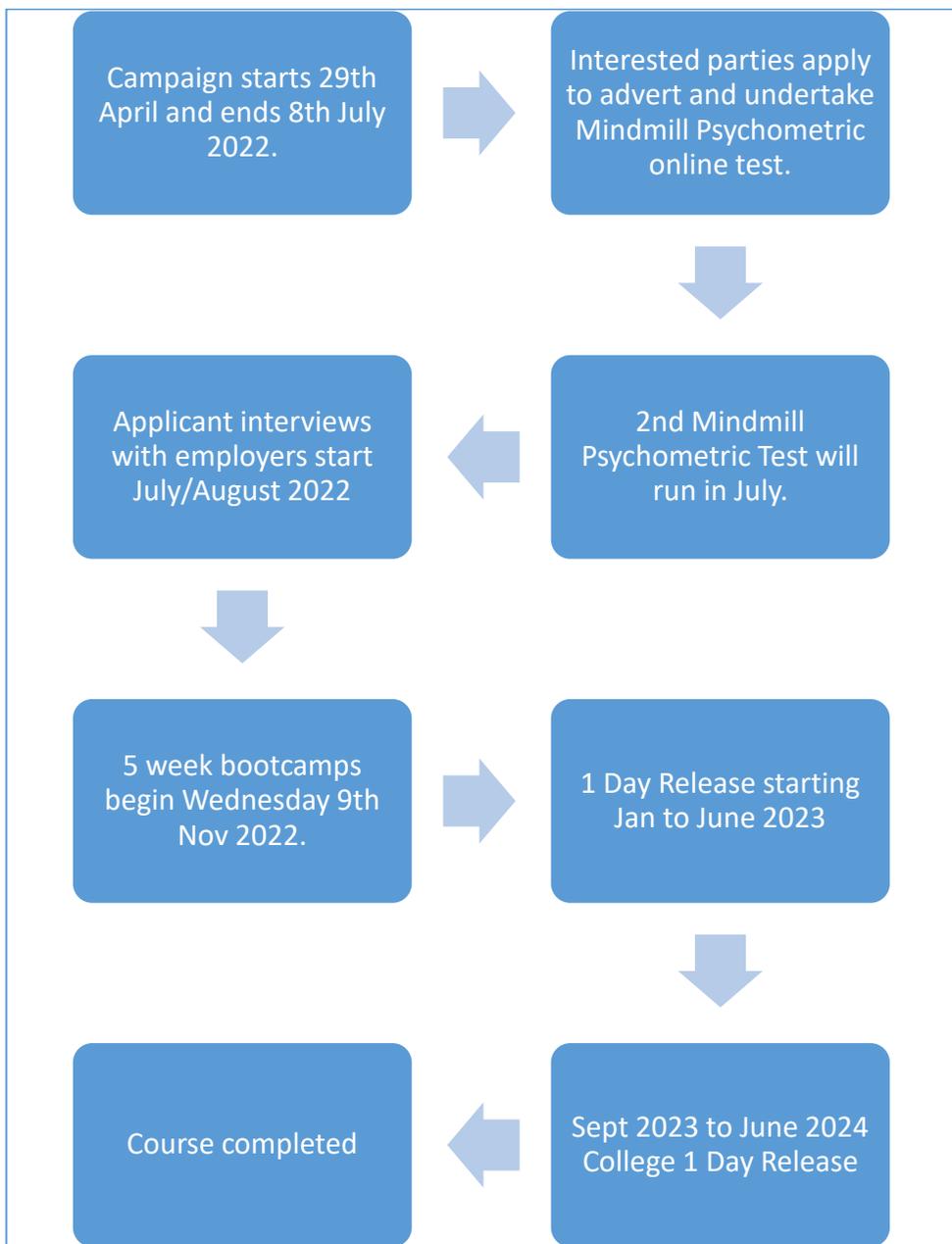
An IT and Telecoms Professional apprentice also receives 'off-the-job' training, usually on a day-release basis with Belfast Metropolitan College, to work towards achieving a vocational two A-Level equivalent OCR Technical Diploma qualification.

Assessors from Belfast Metropolitan College will meet with the apprentice and employer to discuss their training needs and will then develop an appropriate training programme for the apprentice. Belfast Metropolitan College will be with the apprentice throughout their apprenticeship to support them and make sure they are making progress.

The apprentice is with the employer for four days a week and with Belfast Metropolitan College one day a week. The employer will pay the apprentice for their time spent with the training supplier. The apprenticeship programme is free to private sector companies and there are no course or exam fees for the apprentices.

Belfast Met has been offering Level 3 Apprenticeships for the past 16 years. The current programme offers two IT apprenticeship routes. These are Networking Infrastructure and Software Development. Belfast Met will aid employers with the selection process by placing an advert and running aptitude tests (with the aid of MindMill). This process happens over the summer with an October/November start.

2022-2023 Apprenticeship Recruitment Process and Roadmap



Example of some of the employers involved and last year's advert



Previous Recruitment Advert







*This project is part funded through the Northern Ireland European Border Fund Programme 2014-2020 and the Department for the Economy.

IT Apprenticeship

Applications open from 26th June - 31st August

Gain IT skills and experience with excellent employer opportunities and training delivered by Northern Ireland's designated Digital IT Curriculum Hub

**make IT...
your career**

**Level 3
A Level Equivalent:**

- Networking & Infrastructure
- Software Development
- Electronic Telecommunications (via PSNI). Closing date 17th August 2020)

**Level 5
Higher Level**

- Cyber Security & Networking Infrastructure
- Software, Cloud & Application Development



For further information and to apply go to www.belfastmet.ac.uk/it-apprenticeship *make it at the met*









Apprenticeship in Networking Infrastructure

Year 1

5-week Bootcamp including Cisco Networking Essentials – starting middle of November

Fundamentals of IT

Cyber Security

Computer Networks

Global Information

Pearson IT Specialist Certification in Networking

Pearson IT Specialist Certification in Cybersecurity

BTEC Level 3 NVQ Units (agreed with assessor)

Year 2

IT Technical Support

Hackathon

Pearson IT Specialist Certification in Network Security

Project based learning incorporating Product Development, Mobile Technology, and Internet of Everything Units)
Assignment based

BTEC Level 3 NVQ Units (agreed with assessor)

Level 3 Apprenticeship in Networking Infrastructure – Unit Overview P00158/AB1

Bootcamp

Apprentices will attend a 3 day per week bootcamp for five weeks. The apprentices will study towards the and Cisco Networking Essentials certification. The topics covered with this certification includes networking concepts, routing protocols, IP addressing, understanding networking devices, configuring routers and switches and device security. Apprentices will also cover employment rights and responsibilities.

Cyber Security (Exam)

This unit has been designed to enable students to gain knowledge and understanding of the range of threats, vulnerabilities and risks that impact on both individuals and organisations. Students will learn about the solutions that can be used to prevent or deal with cyber security incidents resulting from these challenges. They will be able to apply your knowledge and understanding of cyber security issues and solutions by reviewing and making recommendations for ways to best protect digital systems and information.

Computer Networks

The purpose of this unit is to give students the practical ability to plan, implement and maintain computer networks. The approach adopted by this unit is 'bottom up' where you begin with a solid set of components, cables and connectors of a network and then progressively build a networking capability. The range of protocols has been deliberately limited to those which are used in the vast majority of computer networks, TCP/IP and Ethernet.

Pearson IT Specialist in Networking



This certification will provide students with a basic knowledge of networking. Students will learn about networking fundamentals, network infrastructures, , network hardware, protocols and services and network troubleshooting.

Pearson IT Specialist in Cybersecurity

With this certification, students will gain a knowledge of cybersecurity including security principles, network security concepts, endpoint security, vulnerability assessment and risk management and incident handling.



Global Information (Exam)

The purpose of this unit is to demonstrate the uses of information in the public domain, globally, in the cloud and across the internet, by individuals and organisations. Students will discover that good management of both data and information is essential, and that it can give any organisation a competitive edge.

Internet of Everything

This unit is about the use of the internet and how it is impacting people and society. Students will learn about the Internet of Everything (IoE) and how it is used. With the knowledge, gained students will carry out a feasibility study for a potential idea. Students will present idea and use their feedback to revise your proposal

Fundamentals of IT (Exam)

This unit will provide a sound understanding of IT technologies and practices essential for IT professionals. Information learnt in this unit will provide a solid foundation in the fundamentals of hardware, networks, software, the ethical use of computers and how business uses IT.

Product Development

The purpose of this unit is to prepare students to undertake product development activities. They will learn about different product design methodologies and the role of the product development life cycle. In addition, they will discover the factors that influence product developments. Whether students are building a network, developing a website, developing a system for data analytics or creating an augmented or virtual reality resource, they are all products. It is therefore important that they understand the processes required for the development of products and that they can apply them to a variety of situations.

Mobile Technology

The aim of this unit is to broaden students' knowledge and understanding of the wider potential of mobile technologies and its consequences to people and businesses. This unit is as much about new technologies as it is about promoting critical analysis of existing situations and proposing better solutions.

Pearson IT Specialist in Network Security

With this certification, students will gain a knowledge of network security including defense in depth, operating system security, network device security and secure computing.



Apprentices will choose four of the following units depending on their job role and responsibilities. These will be agreed with their line manager/mentor and assigned assessor.

- Project management
- Business computing
- Systems analysis and design
- Social media and digital marketing
- Developing a Smarter Planet
- Computer systems – hardware
- Computer systems – software
- IT technical support

Apprenticeship in Software Development

Year 1

5-week Bootcamp in Pearson IT Specialist Certification in Software Development.

Fundamentals of IT

Cyber Security

Web Design & Prototyping

Global Information

Pearson IT Specialist Certification in HTML5 Development

Pearson IT Specialist Certification in Cybersecurity

BTEC Level 3 NVQ Units (agreed with assessor)

Year 2

Pearson IT Specialist Certification in Java

Pearson IT Specialist Certification in Databases

Project based learning incorporating Product Development, Application Design, and Internet of Everything Units)
Assignment based

BTEC Level 3 NVQ Units (agreed with assessor)

Apprenticeship in Software Development – Unit Overview

P00158/AD1

Bootcamp

Apprentices will attend a 3 day per week bootcamp for five weeks. The apprentices will study towards the new Pearson IT Specialist Certification in Software Development. This course will give students an introduction to general software development and will then walk them through the basics of general software development, core programming, object-oriented programming, web applications and databases. Apprentices will also cover employment rights and responsibilities.

Cyber Security (Exam)

This unit has been designed to enable students to gain knowledge and understanding of the range of threats, vulnerabilities and risks that impact on both individuals and organisations. Students will learn about the solutions that can be used to prevent or deal with cyber security incidents resulting from these challenges. They will be able to apply your knowledge and understanding of cyber security issues and solutions by reviewing and making recommendations for ways to best protect digital systems and information.

Web Design & Prototyping

In this unit, students will research, design and produce an interactive, responsive website that is specific to a client's needs, culminating in presenting the concept of the website using the prototype to the client. Student will also learn about the security risks in website design and how to minimise these threats.

Pearson IT Specialist in Network Security



With this certification, students will gain a knowledge of network security including defense in depth, operating system security, network device security and secure computing.

Pearson IT Specialist in HTML5 Application Development (online Exam)



With this certification, students will gain an understanding of fundamental HTML5 concepts, CSS Fundamentals, graphics and animation, Form, Layouts and JavaScript coding.

Global Information (Exam)

The purpose of this unit is to demonstrate the uses of information in the public domain, globally, in the cloud and across the internet, by individuals and organisations. Students will discover that good management of both data and information is essential, and that it can give any organisation a competitive edge.

Internet of Everything

This unit is about the use of the internet and how it is impacting people and society. Students will learn about the Internet of Everything (IoE) and how it is used. With the knowledge, gained students will carry out a feasibility study for a potential idea. Students will present idea and use their feedback to revise your proposal

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This unit will provide a sound understanding of IT technologies and practices essential for IT professionals. Information learnt in this unit will provide a solid foundation in the fundamentals of hardware, networks, software, the ethical use of computers and how business uses IT.

Product Development

The purpose of this unit is to prepare students to undertake product development activities. They will learn about different product design methodologies and the role of the product development life cycle. In addition, they will discover the factors that influence product developments. Whether students are building a network, developing a website, developing a system for data analytics or creating an augmented or virtual reality resource, they are all products. It is therefore important that they understand the processes required for the development of products and that they can apply them to a variety of situations.

Application Design

In this unit, students will explore potential ideas for a new application and develop the fundamental design for it. They will then develop the designs for an application and how users will interact with it. The designed application can be for any sector and for any purpose. They will have the opportunity to present your ideas, prototype them, and gain feedback before refining your design.

Pearson IT Specialist in Databases (Online Exam)



This certification will help students become familiar with concepts and technologies pertaining to Databases. In this course, they will learn about database design, DDL, DML and Data retrieval.

Assessor Based Units

Apprentices will choose four of the following units depending on their job role and responsibilities. These will be agreed with their line manager/mentor and assigned assessor.

- Data analysis and design
- Project management
- Business computing
- Systems analysis and design
- Social media and digital marketing
- Software engineering for business
- Big Data analytics
- Developing a Smarter Planet

Entry Requirements

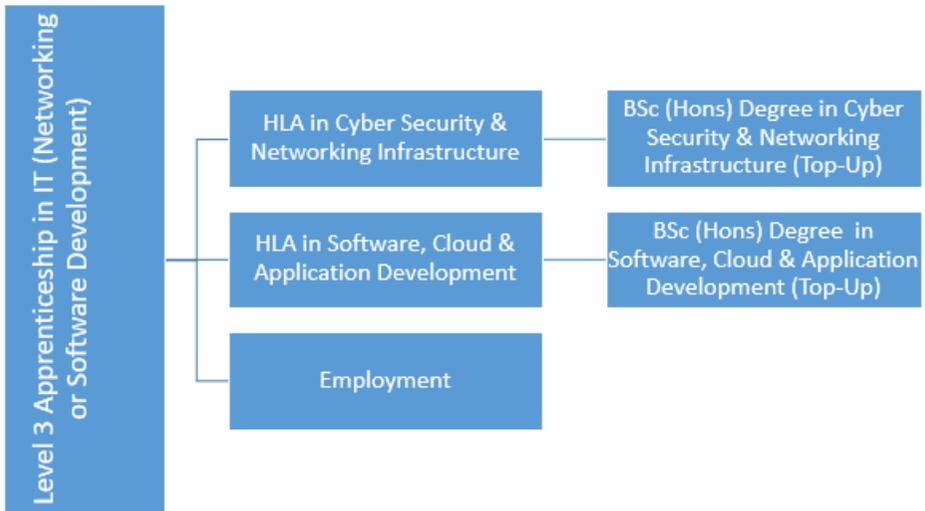
Suggested Entry Requirements for Applicants are:

Experience is not required but applicants must possess a minimum of 5 GCSEs of Grade C or above, including English and Mathematics, and a pass at A or AS Level in any subject area OR an equivalent qualification in any discipline. These entry requirements can be reduced or enhanced by an employer but GCSE (grade C or above) in English and Mathematics or Essential Skills Level 2 in Literacy and Numeracy are essential.

Specific requirements of the programme:

- Each apprentice either is a new employee or is taking on a new job role, with an existing employer, commensurate to the apprenticeship being pursued.
- An appropriate Apprenticeship Agreement is in place with the employer.

Progression



Contact Details

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Notes

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