



Programme Specification

COM-HNC-2018: Higher National Certificate in Computing

Pearson Higher National Certificate awarded by Pearson (FHEQ Level 4)

Programme Status: Approved | Version: 1

Introduction

This programme specification provides a summary of the main features of the Higher National Certificate in Computing programme and the learning outcomes that you as a student might reasonably be expected to achieve and demonstrate on successful completion of the programme.

Further detailed information related to this programme and the College can be found in the following resources:

- Programme Handbook
- B&FC Student Handbook
- B&FC Admissions Policy
- Work based and placement learning handbook (for foundation degrees)
- Student guide to assessment and feedback

Key Programme Information

Programme Code	COM-HNC-2018
Programme Title	Higher National Certificate in Computing
Teaching Institution	Blackpool and The Fylde College
Professional, Statutory and Regulatory Body (PSRB) Accreditation	None
UCAS Code	
Language of Study	English
Version	1
Approval Status	Approved
Approval Date	02 October 2018
JACS Code	
Programme Leader	David Seddon

Programme Awards

Award	Award Type	Level	Awarding Body
Pearson Higher National Certificate	Higher National Certificate	Level 4	Pearson

Programme Overview

If you are looking for a recognised qualification that covers a broad spectrum of exciting and contemporary computer science and digital technologies, the HNC in Computing is an excellent programme to get you involved in Higher Education level study in this ever-changing and vibrant sector. If you are in work and want to retrain, sharpen your skills or if you are in a computing-related job, receive a qualification that recognises the work you do, our part-time delivery provides a manageable two year route so you can manage your commitments and studies to experience success.

Blackpool and the Fylde College is committed to providing a highly responsive curriculum that is employment and future-focused and will enable you to develop the essential knowledge and skills that will prepare you for future success in work and life.

The HNC Computing is recognised qualification that has recently been redeveloped in consultation with industry to meet the needs of the digital sector and prepare students for a

range of entry level job roles or progression to further more highly specialised study, such as our British Computer Society accredited and Lancaster University awarded degree programmes.

The HNC Computing can be delivered full-time over 1 year or part-time over 2 years. This is ideal if you are looking to enter higher education however have other daily commitments. Also it aids if you are already in a computing role and are looking to update skills with a recognised qualification. The HNC Programme includes a range of core digital skills that forms the basis for a full range of contemporary computing disciplines in the ever-growing digital economy.

Key elements of the programme include:

- You will use industry standard languages and development environments such as the Adobe suite, Visual Studio, Packet tracer and HTML / CSS / .NET / SQL
- You will explore web design and development concepts and apply them, creating and testing a website to a client brief
- You will explore and apply basic programming concepts using a contemporary language to develop an application
- You will explore networking concepts, and design and implement a small network in a practical environment to meet business needs
- You will gain general software engineering skills including working with databases requirements gathering, producing technical designs and developing and testing interfaces all of which increase the range of careers you can pursue in the digital sector
- You will explore fundamental cyber security concepts, evolving threats and means of protecting against them
- You will build a portfolio including websites, databases, and applications, providing to employers and clients evidence of your abilities and aptitude for key development roles
- You will manage a project individually, building management and problem solving skills which will enhance value to future employers and develop yourself both personally and professionally

Admission Criteria

Admission to level 4 (HNC) would normally be on the basis of you possessing:

A minimum of 48 UCAS points (previously 120 on former UCAS Tariff) or a Level 3 qualification in any computing discipline. A Level 2 qualification in Maths and English is also desirable.

Applications from students returning to education who do not possess the formal entry qualifications but can demonstrate relevant industry experience, will be considered on merit but would not normally be considered without Level 2 Maths and English.

Career Options and Progression Opportunities

From our research, the Top 3 jobs requiring a HNC Computing include Support Engineer, Analyst and Project Manager. There is clear demand in industry for support roles in particular where candidates have this qualification. A summary of potential careers you can go into include:

- Support Engineer
- Analyst
- Project manager
- Test Engineer
- IT support

Additional roles the HNC may lead to include:

- Web Designer
- Junior Programmer
- Junior Web Developer
- Penetration Tester

However, further career opportunities lie in seeking specialism through progression on to one of our Lancaster University awarded and British Computer Society accredited foundation and honours degrees which are outlined below:

- Network Engineering (Cyber Security)
- Network Engineering (Systems Administration)
- Software Engineering (App Development)
- Software Engineering (Game Development)
- Web Technologies and Digital Media

We are also introducing (subject to validation) a foundation and honours degree programme in Computer Science and Digital Technologies for which the HNC will provide a route to and continue the broad approach to a range of computing specialisms.

There are universities that also consider the HNC a progression route on to level 5 of their degree programmes however please enquire directly with them to confirm.

Programme Aims

- To provide students with a range of computing abilities and skills including analysis of systems, software, hardware and data
- To develop skills in core computing disciplines; including design, implementation and testing of software and systems; enabling students to formulate decisions and implement computer based solutions.
- To aid students to apply their subject-related and transferable skills in contexts where the scope of the task and the criteria for decisions are generally well defined but where some personal responsibility and initiative are required
- To support students in building a commitment to lifelong learning and career development through industry-focused scenarios, work placements, career focussed tutorials, and personal and professional development planning
- To build students' communication, information and digital literacy skills using a range of assessment approaches in core computing disciplines

Programme Learning Outcomes

Level 4

Upon successful completion of this level, students will be able to:

1. Identify, explain and discuss the technical and theoretical disciplines and applications involved in the design, development and testing of computer-based systems
2. Analyse the social, legal and ethical aspects of design, development, testing and evaluation of computer based systems
3. Apply mathematical principles required to design, development and testing of computer based systems

4. Analyse, design, develop, and test, computer based systems, producing appropriate documentation, drawing on supporting evidence, and critically analyse, select and apply suitable tools and techniques with consideration of important relationships between development stages
5. Communicate information in a variety of formats to a range of audiences using a range of media that evidences both academic and digital literacy skills
6. Work effectively as an individual and as a member of a team undertaking critical self-appraisal to support continued professional development, employability, lifelong learning and transferable skills
7. Integrate and apply essential concepts, principles and practice in the design and development of computer based systems, producing well-constructed programs to solve well-specified problems

Programme Structure

Pathway	Module	Level	Credits	Coursework	Practical	Written Exam
Stage 1						
Stage award: Pearson Higher National Certificate (Awarded by Pearson)						
All	D/615/1618: Programming (Mandatory)	4	15	100%		
	H/615/1619: Networking (Mandatory)	4	15	100%		
	H/615/1622: Database Design and Development (Mandatory)	4	15	100%		
	K/615/1623: Security (Mandatory)	4	15	100%		
	K/615/1637: Data Analytics (Mandatory)	4	15	100%		
	R/615/1633: Website Design and Development (Mandatory)	4	15	100%		
	T/615/1625: Managing a Successful Computing Project (Mandatory)	4	15	100%		
	Y/615/1620: Professional Practice (Mandatory)	4	15	100%		

Study Workload

This programme can be delivered in either full or part time modes. The full time delivery mode will be completed within the space of a year whereas the part time delivery mode will take two years to complete. The part time route will have modules delivered to accommodate students in work.

There are many opportunities to work on assessments provided within our timetabled sessions however there will be formative and summative assessments set where you will be expected to complete work by a set deadline. Spending regular time on these activities will make this more manageable hence 'little and often' is an approach we take. Most summative deadlines are set for Sunday night to enable weekends to be spent on finishing work.

The expected volume of independent study is on average 102 hours per module, which equates to 6.375 hours per week. Often students find that this is a high expectation, however through engagement with our formative assessments and direction, building up work over time and improving skills, students find the workload manageable and succeed from a diverse range of backgrounds.

Programme Delivery: Learning and Teaching

This programme is delivered on either a full-time basis for 1 year or a part-time basis over 2 years to provide accessible opportunities for entering Higher Education and gaining new and current skills to enhance your career. We have researched and practiced the best means of teaching technical subjects to ensure that you have the most engaging experience that is effective in supporting the growth of your knowledge and skills.

We have various approaches to ensuring that course content is delivered in the most effective way including: a wealth of multimedia resources so you can work at your own pace; supported workshops to aid you in coding, debugging, problem solving, and enhancing work; lectures, class discussions to introduce students to new concepts, theories and techniques, and to help in building your understanding of theoretical content; clear building of academic skills, employability and graduate skills, with a focus on reflective practice to enhance your personal and professional development; and approachable and friendly staff with an open door policy and individualised support so that students and employers can feel welcome and comfortable in asking questions, gaining feedback and making progress.

The content is regularly updated to ensure you are working with current software tools, technologies and practices. There are specialist rooms containing sandboxed environments and virtualised servers to ensure you build your skills in an industry relevant environment as well as high-spec machines for programming and multimedia development.

In addition, we review and adjust our teaching practices to best suit particular group dynamics and feedback that is received during module delivery to ensure that you have the best experience.

Part-Time Support

If you are part-time, we have a number of mechanisms to ensure that you receive support in achieving even though you may not be able to attend the campus as much as full time students. Our open door policy extends digitally and if you are looking for subject specific support, tutors can arrange with you to communicate digitally at agreed times outside of campus opening hours. Our Higher Education Learning Mentors (HELMs) can provide support with study skills, proof reading, referencing and other academic skills in appointment with you in the evenings or via e-mail, able to be flexible to meet your needs. Additionally, we have excellent multimedia and digital resources which are accessible online as well as specialised software which can be accessed remotely.

Programme Delivery: Assessment

We provide regular formative assessment opportunities giving you the chance to submit drafts and practice tasks to gain feedback to improve. We employ digital submission and feedback so that you can refer back to previous assessments to reflect upon progress and build confidence for future assessments. Assessments include a mix of written reports, design documentation, created assets, source code / program demos, reflective writing and other methods will be employed in coursework so you have a wide range of skills both academic and practical. Graded assessment submissions are balanced throughout the academic year so that you can manage their workload effectively.

All summative (graded) assessments on this programme are coursework based. Typically you'll be given a brief and a set of tasks to perform mapped to different criteria which will determine your grade. This brief will be based on industry focused scenarios, such as developing a website for specific client requirements or a implementing a network infrastructure to support specified business needs. There will be multiple opportunities to seek feedback prior to final submission to support your development and achievement.

Programme Delivery: Work Based and Placement Learning

Pearson have developed the HNC Computing in consultation with representatives from industry including the British Computer Society, Institute of Engineering and Technology, Cisco, and The Tech Partnership among others. This has helped to ensure that the content of the programme is current and industry focused containing a broad range of the skills considered to be a necessary foundation for any computing professional in the digital sector.

We regularly consult with industry partners to ensure that the tools, techniques and development environments are fit for current and evolving needs. This feeds into our investment of resources, training of staff and construction of assessments that mirror industry scenarios, such as designing a database system to meet certain small business needs.

Programme Delivery: Graduate Skill Development

There are a number of graduate skills that are developed during the HNC which will form the basis for further development in additional qualifications at higher levels. These aim to help you perform well in both your academic life and career.

An overview of some of the skills and how this programme links to them follow here:

- **A commitment to lifelong learning and career development**
 - Personal and professional development planning is included in the programme so that you can plan for career and skills development including post-graduate study or career opportunities, most notably in Unit 3: Professional Practice.
- **Collaborative teamwork and leadership skills**
 - As part the Professional Practice unit you will examine teamwork, interpersonal skills and work together in groups to plan and deliver a small training event which will help you develop these transferrable skills for a variety of contexts.
- **Personal and intellectual autonomy**
 - We support your development of independence in academic and practical skills throughout the programme with open scenarios where appropriate to facilitate your creativity and contextualise skills within your personal and career interests.
- **Ethical, social and professional understanding**
 - The Professional Practice and Managing a Successful Computing Project units focus on professional management of individuals, teams and project goals building a professional understanding of approaches in the sector. Ethical considerations are seeded throughout however most notably you will consider this in depth in the Security and Database Design and Development units where storage and security of sensitive data has wider ethical implications and is a hot topic in contemporary society.
- **Communication, information and digital literacies**
 - You will develop your use of digital resources such as searching, blogging, messaging, use of wikis and collaborative environments and cloud storage which are valuable in all industries
- **Global citizenship**
 - The global nature of digital industries means that certain standards and documentation approaches have arisen that can be understood internationally; you will become familiar with some of these through the Programming, Networking and Database Design and Development units. Additionally, you will examine international standards as part of the Security unit.
- **Research, scholarship and enquiry skills**
 - Over the course of the HNC you will develop the capabilities to seek out reliable and valid sources of information to construct arguments and critically engage with literature preparing you for study on degrees and

Study Costs: Equipment Requirements

There is no requirement for students to purchase equipment, as there are several resources on campus however it would be advantageous for you to purchase a computer as some of the software is demanding and you will be able to spend more time on work outside of campus hours.

Students looking to purchase hardware should consider that as a minimum it should be able to support the recommended specifications of the latest Adobe Creative Cloud version. Most mid-high range desktops / laptops are in the region of £400 - £1,000. However, it pays to shop around and speaking to some of our staff could help you in getting best value. Many students prefer to bring their own laptops into college and accessing the network through Wi-Fi to save them from transferring files and we encourage this, however this is a personal choice. Software is available to students from the College and there are many discounted subscriptions available, including student pricing for Adobe Creative Cloud.

We also have remote access to a range of specialist software and you can access your college files from home. This service has been positively commented on by students who are able to continue work without needing to be present on campus.

Study Costs: Additional Costs

There may be opportunities for field trips to conferences, exhibitions or for other interests. This is done so through negotiation as new venues / locations / trips must be Risk Assessed and approved. There is often room in the budget to subsidise costs so discounted contributions can be made yet this will depend on many factors, including entry fees / travel.

Related Courses

Other programmes offered by computing include the Software Engineering which includes specialist streams in Game Development and App Development. The Network Engineering programme includes specialist streams in Systems Administration and Cyber Security which embeds Cisco CCNA content. For Web and Multimedia we offer the Web Technologies and Digital Media programme.

Additionally we have a range of higher apprenticeships from the British Computer Society and a Degree Apprenticeship accredited by the Tech Partnership, the BSc. Digital and Technology Solutions. Apprenticeship options require a participant employer.