

**Programme Specification**  
**HNC CLOUD COMPUTING**

<b>1</b>	<b>Key Dates</b>	<b>Date of Production:</b>	<b>Latest Revision Date:</b>
		May 2021	May 2021
<b>2</b>	<b>School</b>	Computing	
	<b>Faculty</b>	Health Sciences, Meditech and Technology	
<b>3</b>	<b>Awarding Organisation</b>	Pearson	
<b>4</b>	<b>Teaching Institution</b>	Bradford College	
<b>5</b>	<b>Precise title of the final award</b>	Pearson BTEC Level 4 Higher National Certificate in Cloud Computing	
<b>6</b>	<b>Programme title</b>	Higher National Certificate in Cloud Computing	
<b>7</b>	<b>Details of Accreditation</b>	Pearson/BTEC Regulated Qualifications Framework (RQF) - November 2020	
<b>8</b>	<b>FHEQ Level</b> <i>(does not apply to HNC)</i>	Level 4	
<b>9</b>	<b>UCAS Code</b>	-	
<b>10</b>	<b>Mode of Attendance and normal duration of the award</b> <i>[full-time or part-time] 1 year/2 years</i>	Full-time: 1 Year Part-time: 18 Months	
<b>11</b>	<b>Relevant QAA Subject Benchmark Statements</b>	<p>Subject benchmark statements (although not specifically applicable to Higher Nationals provision) provide a means for the academic community to describe the nature and characteristics of programmes in a specific subject or subject area. They also represent general expectations about standards for the award of qualifications at a given level in terms of the attributes and capabilities that those possessing qualifications should have demonstrated.</p> <p>Pearson BTEC Higher National qualifications have been aligned to the Framework for Higher Education Qualifications (FHEQ) in England, Wales and Northern Ireland, and have been accredited to the Ofqual Regulated Qualifications Framework (RQF).</p>	

		<p>The programme learning outcomes mentioned below (section 14) have been informed by the QAA subject benchmark statement for Computing.</p>
<p><b>12</b></p>	<p><b>Criteria for Admission to the Programme</b></p>	<p>48 UCAS tariff points with a minimum of three GCSEs at Grade C/4-5 or above and including Mathematics and English. Applicants who do not meet the criteria for Mathematics and English will be considered and will be invited for interview where they will sit a numeracy and literacy skills assessment.</p> <p>The School of Computing welcomes applications from candidates who do not meet the above criteria. Where this is the case, applicants will be invited for interview at which they will be expected to provide a portfolio (either physical or digital) that:</p> <p>Demonstrates professional industry experience in a Computing discipline;</p> <p>OR</p> <p>Provides examples of computer skills appropriate to Level 4 study. Examples could include:</p> <ul style="list-style-type: none"> <li>▪ Digital media</li> <li>▪ Website development</li> <li>▪ App development and programming skills</li> <li>▪ Network design</li> <li>▪ Hardware maintenance</li> </ul> <p>Candidates will also be required to undertake literacy and numeracy skills assessment along with a programming aptitude test.</p>
<p><b>13</b></p>	<p><b>Educational Aims of the Programme</b></p>	<p>The Pearson BTEC Level 4 Higher National Certificate in Cloud Computing offers students a broad introduction to the subject via a mandatory core of learning, while allowing for the acquisition of skills and experience through the selection of optional units across a range of occupational sectors at Level 4. This builds underpinning core skills while preparing students for subject specialisation at Level 5. Students will gain a wide range of sector knowledge tied to practical skills gained in research, self-study, directed study and workplace scenarios.</p> <p>At Level 4, students develop a broad knowledge and awareness of key aspects of the cloud sector through six core units, including a unit assessed through a Pearson-set assignment.</p> <p>The six core units are:</p> <ul style="list-style-type: none"> <li>▪ Unit 1: Cloud Fundamentals</li> </ul>

- Unit 2: Networking in the Cloud
- Unit 3: Security in the Cloud
- Unit 4: Programming
- Unit 5: Database Design and Development in the Cloud
- Unit 6: Deploying and Operating in the Cloud (Pearson Set).

Graduates successfully completing the Pearson BTEC Higher National Certificate in Cloud Computing will be able to demonstrate a sound knowledge of the foundational concepts of cloud computing, including hands-on practical experience. They will be able to communicate accurately and appropriately and will have the qualities needed for employment that requires some degree of personal responsibility. Students will have developed a range of transferable skills to ensure effective team working, to take independent initiative, organisational competence and problem-solving strategies. They will be adaptable and flexible in their approach to computing, show resilience under pressure, and meet challenging targets within a given resource.

Successful completion of the programme can lead to progression via the RPL process onto one of two honours degrees in the disciplines of Software Engineering or Networking Infrastructure and Security. These programmes are currently offered by the Computing team.

The objectives of the Pearson BTEC Higher Nationals in Cloud Computing are as follows:

- to equip students with cloud computing skills, knowledge and the understanding necessary to be job ready in the cloud computing field.
- to provide education and training for a range of careers in cloud computing, with specific emphasis on roles in cloud support, cyber security and software development.
- to provide opportunities for students to enter or progress in employment in cloud computing roles or to progress to higher education qualifications such as an Honours degree in cloud computing or a related area.
- to provide insight and understanding into international cloud computing operations and the opportunities and challenges presented by a globalised marketplace.
- to equip students with knowledge and understanding of culturally diverse organisations, cross-cultural issues, diversity and values.
- to provide opportunities for students to develop the skills, techniques and personal attributes essential for successful working lives.
- to provide opportunities for those students with a global outlook to aspire to international career pathways.
- to provide opportunities for students to achieve a nationally recognised professional qualification.
- to provide opportunities for students to achieve vendor accredited certifications.
- to offer students the chance of career progression in their chosen field.
- to allow flexibility of study and to meet local or specialist needs.

- to offer a balance between employability skills and the knowledge essential for students with entrepreneurial, employment or academic aspirations.

We will meet these objectives by:

- providing a thorough grounding in cloud computing principles at Level 4 that leads the student to a range of specialist progression pathways at Level 5 that relate to individual professions in the cloud computing sector.
- enabling progression to a university degree by supporting the development of appropriate academic study skills.
- enabling progression to further professional qualifications in specific cloud-based computing areas by mapping to units in vendor accredited certificates.
- support for students and tutors through a specialised package of resources, development tools and credits towards certification, provided by AWS Educate. The package content has been aligned with the units and Learning Outcomes of the core and specialist units. Schemes of Work and Example Assessment Briefs are also provided.

<b>14</b>	<b>Programme Learning Outcomes</b>	
	<p>By the end of the programme, students will have developed a deeper understanding of the principles, technical skills and professional skills that are required by the cloud computing industry. Students will have the potential to enter the world of work or have the potential to pursue entry onto a Level 5 programme within the Computing team’s portfolio of programmes.</p> <p>On successful completion of the programme, the student will be able to demonstrate the following:</p>	
	<b>Knowledge and Understanding</b>	
	<b>KU1</b>	Knowledge and understanding of the fundamental principles and practices of the contemporary global computing environment.
	<b>KU2</b>	Understanding and insight into different organisations, their diverse nature, purposes, structures and operations and their influence upon the external environment.
	<b>KU3</b>	A critical understanding of the evolving concepts, theories and models within the study of cloud computing across a range of practical and hypothetical scenarios.
	<b>KU4</b>	An ability to evaluate and analyse a range of concepts, theories and models to make appropriate decisions.
	<b>KU5</b>	An appreciation of the concepts and principles of CPD, staff development, leadership and reflective practice as methods and strategies for personal and people development.
	<b>KU6</b>	Knowledge and understanding of vital concepts, principles and theories relating to computing and computer applications, software development, networking and media systems in relation to the cloud.
	<b>KU7</b>	Critical understanding of how cloud-based technologies interrelate and communicate with one another, support processes and lead to a computerised solution to a problem.
	<b>KU8</b>	Understanding of the application of appropriate mathematical techniques in the design and development of software and computer systems.
	<b>KU9</b>	Critical understanding of the use of industry standard technical documentation and practices.
	<b>KU10</b>	Develop a range of multi-disciplined programming and coding skills.
	<b>KU11</b>	Deploy appropriate tools, theories, principles and methodologies to analyse, specify, construct, test and evaluate a computer based system in a cloud appropriate context.
	<b>KU12</b>	An ability to apply industry-standard methods in human-computer interaction to inform the development of usable interfaces.
	<b>KU13</b>	An understanding of the appropriate techniques and methodologies used to resolve real-life problems in the workplace.
	<b>Cognitive Skills</b>	
	<b>CS1</b>	Deploy appropriate theory, practices and tools in order to analyse, specify, design and implement cloud-based computing systems and software applications.

<b>CS2</b>	Recognise and critically evaluate the professional, economic, social, environmental, moral and ethical issues that influence the sustainable exploitation of computer-based technologies.
<b>CS3</b>	Critique a range of systems and operations, and their application, especially in a cloud setting, to maximise and successfully meet strategic objectives.
<b>CS4</b>	Interpret, analyse and evaluate a range of data, sources and information to inform evidence-based decision making.
<b>CS5</b>	Synthesise knowledge and critically evaluate strategies and plans to understand the relationship between theory and real-world scenarios.
<b>CS6</b>	Evaluate the changing needs of the business environment and have confidence to self-evaluate and undertake additional CPD as necessary.
<b>Applied Skills</b>	
<b>AS1</b>	Evidence the ability to show client relationship management and develop appropriate policies and strategies to meet stakeholder expectations.
<b>AS2</b>	Apply innovative ideas to develop and create new systems or services that respond to the changing nature of organisations.
<b>AS3</b>	Integrate theory and practice through the investigation and examination of practices in the workplace.
<b>AS4</b>	Develop outcomes for clients using appropriate practices and data to make justified recommendations.
<b>AS5</b>	Apply IT concepts and principles to critically evaluate and analyse complex practical problems and provide IT-based solutions.
<b>AS6</b>	Effectively apply appropriate computer-based technologies to analyse, develop and maintain reliable software in the cloud.
<b>AS7</b>	Employ a range of analytical techniques and design tools in the development of secure software in a cloud-based setting.
<b>AS8</b>	Locate, receive and respond to a variety of information sources (e.g. textual, numerical, graphical and computer-based) in defined contexts.
<b>Transferable Skills</b>	
<b>TS1</b>	Develop a skill set to enable the evaluation of appropriate actions taken for solving problems in a specific organisational context.
<b>TS2</b>	Self-reflection, including self-awareness; the ability to become an effective self-student and appreciate the value of the self-reflection process.
<b>TS3</b>	Undertake independent learning to expand on own skills and delivered content.
<b>TS4</b>	Competently use digital literacy to access a broad range of research sources, data and information.
<b>TS5</b>	Communicate confidently and effectively, both orally and in writing, both internally and externally with organisations and other stakeholders.
<b>TS6</b>	Communicate ideas and arguments in an innovative manner using a range of digital media.
<b>TS7</b>	Communicate effectively, verbally and in writing and articulate well-defined issues, for a variety of purposes, taking into account the audience viewpoint.
<b>TS8</b>	Demonstrate strong interpersonal skills, including effective listening and oral communication skills, as well as the associated ability to persuade, present, pitch and negotiate.

<b>TS9</b>	Identify personal and professional goals for CPD in order to enhance competence to practise within a chosen computing field.
<b>TS10</b>	Take advantage of available pathways for continuing professional development through higher education, professional body qualifications and vendor accredited certifications.
<b>TS11</b>	Develop a range of skills to ensure effective team working, independent initiatives, organisational competence and problem-solving strategies.
<b>TS12</b>	Show an ability to work as a member of a development team, recognising the different roles within a team and the different ways of organising teams.
<b>TS13</b>	Reflect adaptability and flexibility in approach to work; showing resilience under pressure and meeting challenging targets within given deadlines.
<b>TS14</b>	Use quantitative skills to manipulate data, evaluate and verify existing theory.
<b>TS15</b>	Show awareness of current developments within the computing industry and their impact on employability and CPD.
<b>TS16</b>	Manage small- to medium-scale projects using appropriate planning and time-management techniques.
<b>TS17</b>	Display emotional intelligence and sensitivity to diversity in relation to people and cultures.



<p><b>15</b></p>	<p><b>Key Learning &amp; Teaching Strategy Methods</b></p>
<p>The learning and teaching strategy for the HNC Cloud Computing is explicitly designed to contribute to the achievement of the intended learning outcomes which are clearly expressed at programme and unit level.</p>	
<p>Lectures and Seminars</p>	<p>Along with workshops, these are the most common techniques used by lecturers in the Computing team. They offer an opportunity to engage with the full cohort of students, where the focus is on sharing knowledge through the use of presentations. Unit tutors have extensive subject specialist knowledge and experience which is embedded into lectures and seminars to ensure that the students have up-to-date and industry specific knowledge.</p>
<p>Workshops and Labs</p>	<p>These are used to build on knowledge shared via tutors and seminars. They allow students to experience first-hand the range of specialist software and hardware used in industry. Teaching can be more in-depth where knowledge is applied, for example, to case studies or real-life examples. Workshops could be student-led, where students present, for example, findings from independent study. Workshops are timetabled for each unit to ensure that students are able to stretch their learning and seek additional support from teaching staff. The balance between lectures, seminars and workshops is dictated by the learning outcomes for each unit.</p>
<p>Tutorials</p>	<p>These provide an opportunity for focused one-to-one support, where teaching is led by an individual student's requirements. These can be most effective in the run-up to assessment, where tutors can provide more focused direction, perhaps based on a formative assessment. Students will have a structured tutorial programme and can request additional tutorials if required. All students will participate in an extensive induction which will commence at the start of the programme and continue throughout their studies. This will include re-visiting and developing academic skills including academic writing, research and referencing, alongside developing key soft skills.</p>
<p>Virtual Learning Environments (VLEs)</p>	<p>These are invaluable to students studying on a face-to-face programme. Used effectively, VLEs not only provide a repository for taught material such as presentation slides or handouts, but could be used to set formative tasks such as quizzes. Further reading is located on the VLE, along with a copy of the programme documents, such as the handbook and assessment timetable. The subject specialist librarian regularly accesses and updates programme and VLE pages to ensure that the most relevant and up to date journals and e-books are linked and students have access to them. Tutors provide a wide range of resources on the VLE and through MS Teams, including further reading, videos, flipped learning tasks and links to essential sources.</p>



<p>Work Based Learning</p>	<p>The Computing teaching team works closely with a number of industry partners to ensure that academic content is closely linked to the world of work. This adds realism and provides students with an opportunity to link theory to practice.</p> <p>As far as possible, each student will undertake a ‘live’ project as part of the programme. The specification for this will be agreed with an industry partner who may also provide mentoring, site visits, support and advice during the development stage. Each academic year, the Computing team holds a Project Open Day which is attended by local employees, College stakeholders, academic and support staff. This provides valuable feedback for students as well as providing a further opportunity to engage with the wider computing community.</p> <p>Although work placements are not mandatory on the programme, students will be encouraged to undertake industry work placements throughout their programme to enrich the skills and knowledge gained and develop contacts in a range of industries.</p>
<p>Guest Speakers</p>	<p>A programme of events has been developed where experts from industry or visiting academics in the subject area that is being studied will present to the students. The Computing team runs a series of ‘Tech Talks’ where industry specialists have visited the College to speak with students, local employers and College stakeholders.</p> <p>The School of Computing also holds an annual Student Conference. This features talks from alumni who are now working successfully in industry. The conference also features talks from final year degree students who, through sharing their experience, provide inspiration and focus for our Level 4 and 5 students.</p> <p>The objective is to make the most effective use of an expert’s knowledge and skill by adding value to the teaching and learning experience.</p>
<p>Field Trips</p>	<p>Effectively planned field trips, which have a direct relevance to the syllabus, add value to the learning experience. The Computing team plans a range of visits to conferences, seminars and events during the academic year. These include visits to:</p> <ul style="list-style-type: none"> <li>▪ IPEXpo in Manchester</li> <li>▪ Leeds Tech User Group</li> <li>▪ Tech Huddle in Manchester</li> <li>▪ Leeds Digital Job Fair</li> </ul> <p>Through these trips, students relate theory to practice, have an opportunity to experience organisations in action, and potentially open their minds to career routes.</p>

	<p>The programme will produce students who possess a rounded knowledge and understanding of Cloud Computing principles and have the skills to analyse complex problems appropriate to Cloud Computing. The learning and teaching strategy is designed to supplement the students' existing knowledge and to encourage their acquisition of new subject knowledge, while supporting them in the move towards a greater degree of independence and self-direction. It has been informed by the College's HE Learning, Teaching and Assessment Strategy.</p> <p>All students have access to College library/learning centre resources including Maths and English Language workshops.</p> <p>Through lectures, students are encouraged to develop the understanding of the concepts, theories and principles prior to application. Students will develop skills in listening and selective note taking and appreciate how information is structured and presented.</p>
<p><b>16</b></p>	<p><b>Key Assessment Strategy/Methods</b></p> <p>The programme assessment strategy was developed with reference to the College HE Learning, Teaching and Assessment Strategy. The assessment process for the HNC Cloud Computing programme reflects both the aims and learning objectives of the programme and establishes clear links with the underlying philosophy of the learning and teaching strategy. This requires the use of a wide range of assessment methods involving an appropriate balance between formative and summative methods.</p> <p>Formative assessment is primarily developmental in nature and designed to give feedback to students on their performance and progress. Assessment designed formatively should develop and consolidate knowledge, understanding, skills and competencies. It is a key part of the learning process and can enhance learning and contribute to raising standards. Through formative assessment, tutors can identify students' differing learning needs early on in the programme and so make timely corrective interventions. Tutors can also reflect on the results of formative assessment to measure how effective the planned teaching and learning is at delivering the syllabus. Each student should receive one set of written formative feedback. This type of formative assessment encourages reflective practice, develops academic and personal skills and builds student confidence. Formative assessment is in evidence in all units throughout the programme.</p> <p>Summative assessment is where students are provided with the assignment grades contributing towards the overall unit grade. For summative assessment to be effective it should also give students additional formative feedback to support ongoing development and improvement in subsequent assignments. All formative assessment feeds directly into the summative assessment for each unit and lays the foundations from which students develop the necessary knowledge and skills required for the summative assessment.</p> <p>Each unit has a set of assessment criteria which the student must demonstrate to achieve a pass grade. Students will undertake one or more pieces of assessment for each unit and will need to show the assessment criteria for the unit have been met. Some of the assessments have elements of negotiation where the student can make decisions and agree with the tutor what will be undertaken for assessment. This ensures that the work has personal and professional relevance.</p>

Underpinning assessment are the following principles:

- Assessment is valid - in that it tests an appropriate skill or ability.
- Assessment is reliable - in that the same result would be achieved, if repeated.
- Assessment is relevant - in that it is set in the context of the practices and needs of industry.
- Assessment forms part of a student's learning - in that assessment is not seen as simply a measurement tool but as a key part of the learning process and, through formative feedback, a means of supporting progression.

For each year of study, the programme team will monitor summative assessment requirements across units in order to, where possible, smooth student workload.

Each unit in the programme has a set of assessment criteria which the student must demonstrate to pass the unit. Students will undertake one or more pieces of assessment for each unit and will need to show the assessment criteria for the unit have been met. Some of the assessments have elements of negotiation where the student can make decisions and agree with the tutor what will be undertaken for assessment. This ensures that the work has personal and professional relevance.

Assessments may include elements of:

- practical assessments;
- portfolios of evidence;
- 'in class' tests;
- lab work;
- case studies;
- examinations, both open and closed book;
- reflective activities where you look back over your experiences, analyse them with the assistance of relevant theory and reflective tools, and learn from the experience;
- online discussions that you have had with your peers, tutors and invited contributors to the programme;
- oral and written reports;
- journals, blogs and log books;
- plans (e.g., action plans, plans for your group activities);
- presentations; and
- time-constrained tasks.

All written work related to assessments will be submitted via Turnitin to ensure authentication of students' work.

<b>17</b>	<b>Programme Units</b>					
	<b>Stage 1 (total 120 credits)</b>					
	<b>Unit number</b>	<b>Pearson code</b>	<b>Title</b>	<b>Credits</b>	<b>Level</b>	<b>Mandatory Core or Centre Selected Specialist Unit</b>
	1	T/618/4883	Cloud Fundamentals	15	4	Mandatory Core
	2	A/618/4884	Networking in the Cloud	15	4	Mandatory Core
	3	F/618/4885	Security in the Cloud	15	4	Mandatory Core
	4	D/615/1618	Programming	15	4	Mandatory Core
	5	J/618/4886	Database Design and Development in the Cloud	15	4	Mandatory Core
	6	L/618/4887	Deploying and Operating in the Cloud	15	4	Mandatory Core
	7	R/618/4888	Website Design and Development in the Cloud	15	4	Centre Selected Specialist Unit
10	J/615/1628	Computer Systems Architecture	15	4	Centre Selected Specialist Unit	

## 18 Programme Structure

Both the full-time and part-time HNC Cloud Computing structures are delivered in a semesterised approach. The units are sequenced to provide students with a coherent learning experience which will satisfy the programme aims and outcomes and enhance student retention. The structure will also ensure a practicable, even spread of student assessments throughout the academic year.

The units on this programme have been designed from a learning time perspective. For example, a 15-credit point unit is equivalent to approximately 150 learning hours, of which 60 hours will be guided learning hours (i.e. when your tutor is present in a lecture or workshop)

The HNC Cloud Computing programme has a total value of 120 credits and is equivalent to approximately 1200 hours total learning time (TLT). Within this learning time - which is time taken by students to complete the learning outcomes of each unit determined by the assessment criteria - there are Guided Learning Hours (GLHs). These are defined as time when your tutor is present and giving specific guidance (e.g.: lectures, tutorials, workshops). On this programme, there are approximately 480 GLHs.

The full-time structure of the HNC Cloud Computing is the same for both a September and January start. The decision to run both the September and January starts is dependent on recruiting a viable cohort.

Part-time students will typically study alongside full-time students. However, consideration will be given to running a separate part-time cohort where there is specific industry demand.

### Full-time September start and full-time January start programme structure

Full-Time - Year 1	
Semester 1	Semester 2
Unit 1: Cloud Fundamentals	Unit 5: Database Design and Development in the Cloud
Unit 2: Networking in the Cloud	Unit 6: Deploying and Operating in the Cloud
Unit 3: Security in the Cloud	Unit 7: Website Design and Development in the Cloud
Unit 4: Programming	Unit 10: Computer Systems Architecture

### Part-time September start programme structure

Part-Time - Year 1	
Semester 1	Semester 2
Unit 1: Cloud Fundamentals	Unit 2: Networking in the Cloud
Unit 4: Programming	Unit 3: Security in the Cloud
Unit 6: Deploying and Operating in the Cloud	

### Part-Time - Year 2

	<table border="1"> <tr> <th colspan="2" data-bbox="169 168 829 224"><b>Semester 3</b></th> </tr> <tr> <td data-bbox="169 224 829 302">Unit 5: Database Design and Development in the Cloud</td> <td data-bbox="829 224 1497 302"></td> </tr> <tr> <td data-bbox="169 302 829 369">Unit 7: Website Design and Development in the Cloud</td> <td data-bbox="829 302 1497 369"></td> </tr> <tr> <td data-bbox="169 369 829 436">Unit 10: Computer Systems Architecture</td> <td data-bbox="829 369 1497 436"></td> </tr> </table>	<b>Semester 3</b>		Unit 5: Database Design and Development in the Cloud		Unit 7: Website Design and Development in the Cloud		Unit 10: Computer Systems Architecture	
<b>Semester 3</b>									
Unit 5: Database Design and Development in the Cloud									
Unit 7: Website Design and Development in the Cloud									
Unit 10: Computer Systems Architecture									
19	<p><b>Support for Students and Their Learning</b></p> <p>Student progression on the programme is supported by subject tutors and central College services.</p> <p><b>College</b></p> <p>The College employs dedicated staff to offer specialist advice and assistance for all students:</p> <p>Bradford Student Health Service is a dedicated NHS GP service specialising in Student Health. The Student Health Service provides a confidential and comprehensive service of health care with access to specialist services. Students who live in the practice area can register with one of the doctors and make full use of the service.</p> <p>Additional Learning Support (Disabilities and Difficulties) look after learning support needs of all students with disabilities or difficulties in College, irrespective of their programme of study. They provide support and guidance for students whilst developing close links with programme tutors to ensure that the support put in place is appropriate to the students' individual needs and the requirements of the programme.</p> <p>Library resources are available on the second floor of the David Hockney Building with library staff available to give assistance, if required.</p> <p>Technology and Media Services are also located on the second floor of the David Hockney Building. Various pieces of IT equipment can be accessed to enhance the learning experience.</p> <p>There are also other areas of personal interest to students, for example, the gym in the Trinity Green Building.</p> <p><b>Programme</b></p> <p>The programme is managed by a Programme Leader who will aim to ensure that the student meets the programme learning outcomes alongside the awarding body expectations for quality.</p> <p>Teaching is delivered by an experienced team of lecturers, each of whom has expertise in a range of specialist subjects.</p> <p>Induction week comprises of a full programme of events designed to welcome to students to the College, and make them familiar with their new surroundings. The process of establishing effective relationships between students and the teaching team begins at this</p>								

	<p>point and activities are geared towards establishing and promoting a cohort identity. All students are provided with a student and programme handbook and supported in gaining access to on-line resources.</p> <p>Extensive use is made of a VLE. This has comprehensive support material at programme and unit level, as well as additional learning resources and links to off-site study support. Independent learning is encouraged through the use of student forums, blogs and message boards. These are also used to provide students with regular and timely formative feedback.</p> <p>At the start of each academic year, all students undertake a numeracy and literacy skills test. The results of these are analysed and allow for student specific additional support to be offered where required.</p> <p>The Computing team's teaching and learning areas are equipped with hardware and software that reflects the standards required by industry. Specialist software is provided. Hardware and software requirements are reviewed annually.</p> <p>A tutorial system is in place that provides academic and pastoral support to all students. Staff are available on both a walk-in and by-appointment basis. Staff are also contactable via email, the VLE and through MS Teams.</p> <p>A Personal Tutor is assigned to each student to provide pastoral care and an opportunity to discuss any issues that may arise throughout the academic year.</p> <p>The College have extensive library facilities including a wide range of on-line resources. Library resources are reviewed by the Programme Area on an annual basis. Group study areas are available within the library.</p> <p>The Teaching Team operates a series of additional workshops throughout the academic year. A specialist tutor is available at each of these to offer support and guidance to students.</p>
<p><b>20</b></p>	<p><b>Distinctive Features</b></p> <p>The HNC Cloud Computing is a work-related qualification for students taking their first steps into employment, or for those already in employment and seeking career development opportunities. The programme provides progression into the workplace either directly or via study at Level 5 and 6 and is designed to meet employer's needs. Pearson BTEC Higher National qualifications are widely recognised by industry as the principal vocational qualification at Levels 4 and 5. When developing the programme, Pearson collaborated with a wide range of students, employers, higher education providers, colleges and subject experts to ensure that the new qualification meets their needs and expectations. They also worked closely with the relevant professional bodies, to ensure alignment with recognised professional standards. There is a great emphasis on employer engagement and work readiness. This can be seen in this programme through the embedding of the Amazon AWS vendor scheme to ensure that students are gaining professional recognition alongside their academic studies. The Pearson BTEC Higher National qualification in Cloud Computing is designed to reflect this increasing need for high quality professional and technical education pathways at Levels 4 and 5, thereby providing students with a clear line of sight to employment and to progression to a degree.</p>



	<p>The Computing team has established close links with both local business and the local community. Wherever practicable, assessment on the programme reinforces these links.</p> <p>At the end of each academic year, the Computing team holds an open event for local and regional businesses where students can demonstrate and showcase their Project work. This forms an integral part of the learning experience and helps create a valuable link between the College, its students and employers. The event is sponsored by Eclipse - a local software development company - who will mentor students undertaking project work as well as providing specialist talks and hosting student visits.</p>
<b>21</b>	<p><b>Regulation of Assessment</b></p> <p>Assessment regulations are as published by the College and are in accordance with guidance provided by Pearson/BTEC. Regulations relevant to this programme of study are published in the programme handbook.</p>
<b>22</b>	<p><b>Indicators of Quality and Standards</b></p> <p>Annual review and monitoring will be conducted in line with College processes and Pearson requirements. The full cycle of review will take place and is identified in the HE Quality calendar. This cycle includes unit review/evaluation by students and staff and Student Experience Surveys (SES).</p> <p>Measures are in place to ensure robust internal and external quality assurance. These quality-related processes are outlined below:</p> <p>Programme committee meetings and annual monitoring events which are attended by student representatives.</p> <p>Unit reviews which are completed by students.</p> <p>Moodle and MS Teams will host chatrooms and forums so that students can liaise regularly with one another as well as tutors.</p> <p>The delivery of the HNC Cloud Computing will be reviewed annually via production of an Annual Monitoring Report and, on a much more regular basis, through meetings of the programme delivery team.</p> <p>The programme will also be subject to external quality assurance processes such as external examiner review.</p>
<b>23</b>	<p><b>The Role of the Awarding Body</b></p> <p>As the awarding body, Pearson provides a programme of BTEC Higher Nationals offering specialist vocational study at Levels 4 and 5 which reflects the requirement of professional organisations and meets the National Occupational Standards for each sector or industry.</p> <p>BTEC Higher Nationals are directly available from Pearson as RQF qualifications. To offer BTEC Higher Nationals, colleges must have both Centre and Qualification Approval.</p>

	<p>Pearson operates a quality assurance system for all BTEC Higher National programmes which ensures that centres have effective quality assurance processes to review programme delivery and that the outcomes of assessment are to national standards.</p>
<b>24</b>	<p><b>External Examination</b></p> <p>Pearson/BTEC assures itself of the standard of provision offered at the College through a series of quality assurance activities, including external examining.</p> <p>An independent academic, appointed by Pearson/BTEC, visits the College and assures themselves and Pearson/BTEC (via an annual report) of the quality of facilities, academic delivery and student achievement against described standards.</p>

### Map of Outcomes to Units

	Knowledge and Understanding													Cognitive Skills						Applied Skills								Transferable Skills																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
L4 Unit 1 Cloud Fundamentals	X	X		X		X	X				X							X			X									X	X	X	X	X			X			X		X					
L4 Unit 2 Networking in the Cloud	X	X	X	X		X	X		X		X			X		X		X			X		X	X	X			X	X	X	X	X	X	X			X	X	X	X	X		X	X			
L4 Unit 3 Security in the Cloud	X	X	X	X		X	X		X		X				X	X		X			X		X	X	X				X	X	X	X	X	X			X	X	X		X		X				
L4 Unit 4 Programming	X		X	X		X	X	X	X	X	X	X		X		X		X			X		X	X	X	X		X	X	X	X	X	X	X			X	X	X	X	X		X	X			
L4 Unit 5 Database Design and Development in the Cloud	X	X	X	X		X	X		X	X	X	X	X	X		X	X	X			X	X	X	X	X	X		X	X	X	X	X	X	X			X	X	X	X	X		X	X			
L4 Unit 6 Deploying and Operating in the Cloud	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X		X		X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L4 Unit 7 Website Design and Development in the Cloud	X	X	X	X		X	X		X	X	X	X		X	X	X		X			X		X	X	X	X		X	X	X	X	X	X	X			X		X	X	X		X	X	X		
L4 Unit 10 Computer Systems Architecture	X		X	X		X	X		X	X	X	X		X		X		X			X	X		X	X	X		X	X	X	X	X	X	X			X	X	X	X	X		X	X			