

## PROGRAMME SPECIFICATION

### ST3560A15 BSc (Hons) Computing

#### General Information

1.	<b>Programme Title</b>	BSc (Hons) Computing
2.	<b>Name of final Award</b>	BSc (Hons) Computing
3.	<b>Awarding body / institution</b>	Lancaster University
4.	<b>Teaching institution</b>	University Centre at Blackburn College
5.	<b>Mode (s) of Delivery</b>	Face to Face, Distance Learning
6.	<b>Full or Part-Time</b>	Full-time, Part-time
7.	<b>UCAS Code</b>	Not yet allocated
8.	<b>Accreditation by a professional / statutory body:</b>	None
9.	<b>Language of Study</b>	English
10.	<b>Work-Based Learning</b>	Not Applicable
11.	<b>Date of Programme Specification preparation / revision</b>	14 Jun 2016
12.	<b>Due for revalidation</b>	01 Sep 2020
13.	<b>The General Aims of the Programme are:</b>	<p>The General aims of the programme are to:</p> <ul style="list-style-type: none"> <li>• Enable students to acquire the ability to recognise applications for new developments as they occur and measure their effectiveness in modern computing environments.</li> <li>• Equip students with transferable knowledge and skills to enable them to argue from competing perspectives to be able to face the challenge of working in complex and unpredictable environments.</li> <li>• Provide the opportunity for graduates to develop their computing skills and business awareness to enable them to function effectively and confidently and work autonomously.</li> <li>• Provide the educational experience which allows graduates to critically examine their own work and make informed responses about their own further development.</li> </ul>
14.	<b>The Educational objectives of the programme are:</b>	<p>More specifically the educational objectives of the programme are to:</p> <ul style="list-style-type: none"> <li>• Produce graduates who have a sound understanding of computing and how it applies to computing and who are able to apply the methods and techniques learned to review, consolidate and extend their knowledge and understanding.</li> <li>• Offer an understanding of how to critically evaluate arguments, assumptions, and abstract concepts and develop the skill to make</li> </ul>

		<p>judgements, frame questions that will lead to a solution or a range of solutions to a given problem.</p> <ul style="list-style-type: none"> <li>• Produce graduates who are able to communicate information and ideas as well as problems and solutions to both specialist and non-specialist audiences in a professional way.</li> <li>• Equip students with the ability to take the initiative and take personal responsibility for their ideas, solutions and work.</li> <li>• Engage students in extensive problem solving activities that are designed to test their ability to deploy accurately established techniques of analysis and enquiry within their chosen subject area.</li> </ul>																						
15.	<b>Applicable QAA Subject benchmarks</b>	The QAA Subject Benchmark Statement Computing (2007)																						
16.	<b>Other external and internal reference points</b>	<p>QAA Guidelines for Preparing Programme Specifications Lancaster guidelines QAA Framework for Higher Education Qualifications (2008) The British Computer Society (BCS) benchmark guidelines The QAA Draft Subject Benchmark Statement: Computing (2015)</p>																						
17.	<b>Programme Learning Outcomes</b>	<p><b>A KNOWLEDGE AND UNDERSTANDING.</b> Students must demonstrate critical understanding, at the appropriate level, of:</p> <table border="1"> <tr> <td>A1</td> <td>The underlying fundamentals of computer and network architectures and how these concepts build into larger and more complex systems</td> </tr> <tr> <td>A2</td> <td>The practical application of programming paradigms, concepts, practices and programming languages</td> </tr> <tr> <td>A3</td> <td>The range of techniques and methodologies available to support the design and development of hardware and software products.</td> </tr> <tr> <td>A4</td> <td>The range of approaches to developing algorithms utilising different modelling techniques.</td> </tr> <tr> <td>A5</td> <td>The role of a variety of stakeholders (such as client, end user, system operator) in the development of software and hardware projects</td> </tr> </table> <p><b>B CRITICAL THINKING / INTELLECTUAL SKILLS.</b> Students must demonstrate skills, at the appropriate level, in:</p> <table border="1"> <tr> <td>B1</td> <td>Identification, analysis and evaluation of a range of techniques or academic sources in order to select those most relevant to a given scenario.</td> </tr> <tr> <td>B2</td> <td>Applying appropriate methods for the collection and analysis of data from both quantitative and qualitative sources.</td> </tr> <tr> <td>B3</td> <td>Identifying and articulating benefits and limitations within a specific context</td> </tr> </table> <p><b>C SUBJECT SPECIFIC SKILLS.</b> Students must demonstrate skills, at the appropriate level, in:</p> <table border="1"> <tr> <td>C1</td> <td>Planning and managing a complete project, individually and as a group.</td> </tr> <tr> <td>C2</td> <td>Applying network and communication protocols and standards in a range of different contexts.</td> </tr> <tr> <td>C3</td> <td>The application of competent programming to a range of different contexts.</td> </tr> </table>	A1	The underlying fundamentals of computer and network architectures and how these concepts build into larger and more complex systems	A2	The practical application of programming paradigms, concepts, practices and programming languages	A3	The range of techniques and methodologies available to support the design and development of hardware and software products.	A4	The range of approaches to developing algorithms utilising different modelling techniques.	A5	The role of a variety of stakeholders (such as client, end user, system operator) in the development of software and hardware projects	B1	Identification, analysis and evaluation of a range of techniques or academic sources in order to select those most relevant to a given scenario.	B2	Applying appropriate methods for the collection and analysis of data from both quantitative and qualitative sources.	B3	Identifying and articulating benefits and limitations within a specific context	C1	Planning and managing a complete project, individually and as a group.	C2	Applying network and communication protocols and standards in a range of different contexts.	C3	The application of competent programming to a range of different contexts.
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		C4	The application of incremental design, product and user testing.		
		C5	Identifying and evaluating compatible software and hardware to provide the required functionality of a given scenario.		
		<b>D</b>	<b>KEY TRANSFERABLE SKILLS.</b>		
			Students must demonstrate skills, at the appropriate level, in:		
		D1	Communicating effectively both orally and through effective writing for a range of audiences and purposes		
		D2	A professional approach to work through the application of best practice, the law and ethical values.		
		D3	Applying general IT for the purposes of communication and the management of information		
		D4	Working effectively independently and as part of a team		
		D5	Reflecting on own development to identify academic and career needs and appropriate courses of action.		
<b>18.</b>	<b>FHEQ Level</b>	6			
<b>19.</b>	<b>Credits</b>	Level 6 - 120			
<b>20.</b>	<b>Requirements</b>	<b>BSc (Hons) Computing (top-up) Stage A</b>			
		<b>Module</b>	<b>Name</b>	<b>Level</b>	<b>Credits</b>
		ST30126	Agile Project Management	6	15
		ST30127	Cyber Security and Threat Management	6	15
		ST30128	e-Business	6	15
		ST30129	Ethical and Legal Issues	6	15
		ST30130	Intelligent Programming	6	15
		ST30131	Major Project	6	30
		ST30132	Mobile Systems Development	6	15
		ST30133	Parallel and Distributed Architectures	6	15
<b>21.</b>	<b>Standard published admission criteria</b>	Students who wish to undertake the top-up programme will be required to have successfully completed the Lancaster University Foundation Degree (Science) in Computing.			
<b>22.</b>	<b>Work Placement</b>	There is no work-based Learning within the level 6 credits of the programme.			
<b>23.</b>	<b>DBS requirements</b>	None			
<b>24.</b>	<b>Other criteria relevant to this programme</b>	Not applicable			
<b>25.</b>	<b>Recognition of Prior Learning / Exemptions</b>	Not applicable			
<b>26.</b>	<b>Opportunities for progression</b>	<p>The programme provides a level of academic quality and computing knowledge that will enable students to progress onto postgraduate level study at other Higher Education Institutes, such as MSc programmes in Databases Design, Computer Science, Internet Technologies and Agile Software Projects.</p> <p>A large majority of universities in the UK, and in the North West of England, offer access to a wide range of postgraduate qualifications in</p>			

		<p>Computing. Some graduates may choose to pursue research roles within an academic environment.</p> <p>Students can progress to a diverse range of professions with an Honours degree in Computing. It is expected that professions such as Software Developer, Business Analysts, Web Developer, Project Manager, Network Designer, Teacher and Games Developer, will be accessible at a more senior level in addition to professions requiring knowledge of more specialist areas such as Data Science, Distributed Computing, Security and Mobile Development.</p> <p>There will also be opportunities for graduate programmes for successful students. Graduate recruitment programmes are offered in computing and IT by a diverse range of companies, including Shell, Step Enterprise, FDM Group, Intel, Google, Hewlett Packard and IBM.</p>
27.	<p><b>Summary of learning, teaching and assessment strategy</b></p>	<p>The teaching, learning and assessment modes throughout the programme will mirror those expected for degrees and outlined in the Quality Assurance Agency Subject Benchmark Statements for Computing (2007).</p> <p>As with the FdSc programme the BSc (Honours) in Computing will be underpinned by the following themes for the learning, teaching and assessment strategy:</p> <ul style="list-style-type: none"> <li>• A strong emphasis on the development of students' ability to engage in critical thinking, academic articulation, problem solving and professional practice;</li> <li>• A focus on providing students with a breadth of core skills and knowledge in both software and hardware, informed by strong communications with industry;</li> <li>• On-going commitment to enhancing the student experience through formative and summative assessment and feedback, and personal support mechanisms;</li> <li>• Use of flexible and appropriate learning methods and materials, to support a range of course access and individual diversity needs.</li> </ul> <p>At level 6 the emphasis from the themes will demonstrate a bias towards the theoretical aspects of computing and independent learning. The application of core skills to more specialised subject areas will challenge students' knowledge and ability, enabling them to push their boundaries into more academic approaches to the discipline.</p> <p>While the number of assignments does not increase at this level there is an expectation for students to be able to extend themselves and write more thoroughly on a subject, or produce more complete solutions and documentation. Given this, there is an increase in word counts and time allocated for examinations to accommodate this. However, the emphasis here is on quality and depth of analysis rather than quantity of discussion.</p> <p>Summative assessment methods include:</p>

		<ul style="list-style-type: none"> <li>• Final practical solutions to computing briefs</li> <li>• Production and planning evidence</li> <li>• Presentations</li> <li>• Reports</li> <li>• Project proposals, schedules and evidence of project planning</li> <li>• Project evaluation statements</li> <li>• Collaborative working with employers.</li> </ul>
28.	<b>Learning and teaching methods used</b>	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Practical laboratory sessions</li> <li>• Workshops</li> <li>• Presentations supported where appropriate by other methods such as seminars</li> <li>• Guest lectures</li> <li>• Distance and e-learning (via VLE)</li> <li>• Blended learning</li> <li>• Industrial visits</li> </ul>
29.	<b>Assessment methods used</b>	<ul style="list-style-type: none"> <li>• Essays</li> <li>• Reports</li> <li>• Exams</li> <li>• In class tests</li> <li>• Presentations</li> <li>• Project</li> <li>• Solution implementation</li> <li>• Demonstration</li> </ul>
30.	<b>Support for students and their learning</b>	<p>Support is offered via:</p> <ul style="list-style-type: none"> <li>• Induction</li> <li>• Diagnostic Assessment (Developmental Needs Analysis)</li> <li>• Nominated Personal Tutor</li> <li>• Individual Tutorials</li> <li>• Group tutorials</li> <li>• Student Support Team</li> <li>• Early Intervention Tutorials</li> <li>• Monitoring of attendance</li> <li>• Library and learning resources</li> <li>• Online resources including the use of Virtual Learning Environments</li> </ul> <p>Specific support for Disabled Students includes Personal Support Profiles, Exam Access Arrangements, specialist equipment, and Read and Write Gold and Mindview software</p> <p>As an institution under the Equality Act 2010 we honour our responsibility to make reasonable adjustment under College policies.</p>
31.	<b>Mechanism for review and evaluation of teaching, learning, assessment, the curriculum and outcome standards</b>	<p>The following instruments are used in assessing fitness for purpose:</p> <ul style="list-style-type: none"> <li>• Learning, Teaching and Assessment Committee – HE</li> <li>• School Board</li> <li>• Programme Committee</li> <li>• Analysis of data on retention, achievement and progression</li> <li>• Peer Observation of Teaching</li> <li>• Annual Programme Review Reports</li> </ul>

		<ul style="list-style-type: none"> <li>• Programme Consultant's meetings and reports</li> <li>• External Examiner's visits and reports</li> </ul>
32.	<b>Mechanism for gaining student feedback on the quality of teaching and the learning experience</b>	<ul style="list-style-type: none"> <li>• Programme Committee</li> <li>• Module evaluation questionnaires</li> <li>• National Student Survey</li> <li>• Personal tutorials</li> <li>• Module tutor review</li> <li>• Spontaneous student feedback</li> </ul>
33.	<b>Committees with responsibility for monitoring and evaluating quality and standards</b>	<ul style="list-style-type: none"> <li>• Academic Board</li> <li>• Learning, Teaching and Assessment Committee – HE</li> <li>• School Board</li> <li>• Programme Committee</li> <li>• Examination Boards including External Examiners from other HE institutions</li> </ul>
34.	<b>Regulation of assessment</b>	<p>All programme work assessment briefs will include details of:</p> <ul style="list-style-type: none"> <li>• The learning outcomes covered by the assignment;</li> <li>• The extent of the coverage of these outcomes;</li> <li>• The tasks to be completed;</li> <li>• Indicative grading criteria;</li> <li>• The author and verifier of the assignment.</li> </ul> <p>Details of the assessment methods to be used are detailed in each module descriptor. All the subject modules for this programme have been designed with explicit, formal assessment criteria.</p> <p>As part of the standard approach to assessment within the Centre and in line with relevant requirements, where students believe that forms of assessment unfairly disadvantage them based on a disability or an underlying medical condition, a discussion about an alternative assessment that is equivalent will be considered, involving the student, the tutor and the programme leader in discussion with the disability team where appropriate.</p> <p>This is moderated through the module leader based on the choices being able to meet the learning outcomes of the module and highlighting equivalency across the student submissions. The initial instructions and choices offered in the assignment will be reviewed through existing mechanisms, utilising both internal and external moderation. In much the same way as the final marks are assessed after the event, so will the format of alternative assessments be examined and assessed for fairness in the moderation and standardisation processes.</p> <p>Marking:</p> <p>The regulations governing the first and second marking of examinations and assignments and their subsequent moderation are provided for within the Learning, Teaching and Assessment strategy for the University Centre Blackburn College. The module tutor carries</p>

		<p>out first marking of assignments. A sample is then second marked in line with the above strategy and made available for moderation at the end of the semester.</p> <p>The Head of School acts as Lead Internal Moderator and has oversight of the process and final agreed marks. Selected samples are made available for the External Examiner for consultation on the final grades. External examiners will be entitled to require students to make presentations of their work before final moderation of marks. All formal examinations are anonymously marked by the module tutor and second marked by a member of the team. Examination papers are subject to the same rules regarding internal moderation and all scripts are made available for final review by the External Examiners. Occasionally, it may be necessary to vary these regulations – for example, to accommodate substantial practical exercises. Permission for any variation of these regulations will require the prior consent of the external examiner(s) and programme consultant(s) for the scheme.</p>
<b>35.</b>	<b>Role of the Programme Consultant</b>	Programme Consultants advise the programme team on the design, delivery and the approach to assessment on the programme
<b>36.</b>	<b>Role of the External Examiner</b>	External Examiners will advise the Assessment Board on matters of standards and fairness of the assessment process and if necessary offer advice on student results. External Examiners will report on whether the standards set are appropriate with reference to external reference points including subject benchmarks, Framework for Higher Education Qualifications and other reference points. They report on the robustness of assessment procedures and standards of student performance, drawing comparison of those standards with similar programmes elsewhere in Higher Education.