

PROGRAMME SPECIFICATION

ST2570A15 FdSc Computing

General Information

1.	Programme Title	FdSc Computing
2.	Name of final Award	FdSc Computing
3.	Awarding body / institution	Lancaster University
4.	Teaching institution	University Centre at Blackburn College
5.	Mode (s) of Delivery	Face to Face, Distance Learning
6.	Full or Part-Time	Full-time, Part-time
7.	UCAS Code	Not yet allocated
8.	Accreditation by a professional / statutory body:	None
9.	Language of Study	English
10.	Work-Based Learning	Not Applicable
11.	Date of Programme Specification preparation / revision	14 Jun 2016
12.	Due for revalidation	01 Sep 2020
13.	The General Aims of the Programme are:	<p>The General aims of the programme are to:</p> <ul style="list-style-type: none"> • Equip students with the ability to solve problems in complex and unfamiliar scenarios within computing and related industries • Develop graduates' skills in the synthesis and critical appraisal of knowledge and research as it applies to computing • Produce independent learners who have a range of interpersonal skills. • To equip graduates with an understanding of the techniques needed to successfully continue learning throughout work and any further study
14.	The Educational objectives of the programme are:	<p>The educational objectives of the programme are for students to be able to:</p> <ul style="list-style-type: none"> • Follow a vocational course of study that develops the student's practical and cognitive skills to solve work related everyday problems by combining knowledge of information transfer, communications technology, software and business context relevant to the computing industry. • Develop professional-level industry related skills, learning, for example, how to build web-sites, design databases and plan networks together with the necessary problem solving techniques.

		<ul style="list-style-type: none"> Equip students with the interpersonal skills necessary to be computing professionals: how to determine user's needs; manage complex projects; successfully design appropriate user interfaces; and how to deal with the legal and ethical issues that working in modern computing environments provoke. Equip students with a broad range of key skills, technical skills and work related skills through effective education and professional work based learning. Develop and encourage professional and personal development. 																						
15.	Applicable QAA Subject benchmarks	QAA Subject Benchmark Statement Computing (2015)																						
16.	Other external and internal reference points	<p>QAA Framework for Higher Education Qualifications (2008) QAA Subject Benchmark Statement: Computing (2015) UCBC Work Based Learning Policy The British Computer Society (BCS) benchmark guidelines QAA Guidelines for Preparing Programme Specifications Lancaster University guidelines QAA Foundation Degree Characteristics Statement (2015)</p>																						
17.	Programme Learning Outcomes	<p>A KNOWLEDGE AND UNDERSTANDING. 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> <tr> <td>A6</td> <td>The scope of the applications of computing from the context of employment and research.</td> </tr> <tr> <td>A7</td> <td>How mathematics underpins and is applied across many aspects of computer science</td> </tr> <tr> <td>A8</td> <td>The fundamentals of data representation, storage and manipulation in a range of practical contexts.</td> </tr> </table> <p>B CRITICAL THINKING / INTELLECTUAL SKILLS. 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>	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	A6	The scope of the applications of computing from the context of employment and research.	A7	How mathematics underpins and is applied across many aspects of computer science	A8	The fundamentals of data representation, storage and manipulation in a range of practical contexts.	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
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		B4	The importance of identifying the ethical and moral impact of current and future developments		
		B5	The application of theory in practice		
		B6	Developing effective reasoned arguments grounded in evidence and research		
		C	SUBJECT SPECIFIC SKILLS. Students must demonstrate skills, at the appropriate level, in:		
		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.		
		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.		
		C6	Problem analysis and the process of developing solutions.		
		D	KEY TRANSFERABLE SKILLS. 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.		
18.	FHEQ Level	4, 5			
19.	Credits	Level 4 - 120 Level 5 - 120			
20.	Requirements	FdSc Computing Stage A			
		Module	Name	Level	Credits
		ST10166	Computer Systems Architectures	4	15
		ST10167	Introduction to Research (Computing)	4	15
		ST10168	Introductory Programming Concepts	4	15
		ST10169	Networked Systems	4	15
		ST10170	Program Design and Development	4	15
		ST10171	Reflective Practitioner (Computing)	4	15
		ST10172	Web & Interface Design	4	15
		ST10173	Logic and Implementation	4	15
		FdSc Computing Stage B			
		Module	Name	Level	Credits
		ST25167	Advanced Programming Concepts	5	15
					Status
					Mandatory

		ST25168	Data and Analytics	5	15	Option
		ST25169	Database Design and Development	5	15	Mandatory
		ST25170	Further Computer System Architectures	5	15	Mandatory
		ST25171	Internet Programming	5	15	Mandatory
		ST25172	Multimedia	5	15	Option
		ST25173	Project Management	5	15	Mandatory
		ST25174	Research Project (Computing)	5	15	Mandatory
		ST25175	Work Based Learning (Computing)	5	15	Mandatory
21.	Standard published admission criteria	<p>Foundation Degree</p> <p>The minimum entry requirement for this Foundation Degree of study at UCBC is 160 UCAS tariff points, which can be made up from any combination of the following, providing they are within a relevant subject:</p> <ul style="list-style-type: none"> • Two GCE A2 level passes; • Pearson BTEC National Diploma/Certificate; • The Extended Diploma; • Other UCAS point-bearing level 3 qualifications; <p>and/or</p> <ul style="list-style-type: none"> • Successful completion of an appropriate Access to HE qualification <p>With at least 80 UCAS points from computing, information technology, mathematics or physical science subjects.</p> <p>Students may be admitted on the basis of 160 UCAS points all of which are from other subject areas provided that these points-bearing qualifications are supported by non-points bearing vocational qualifications such as an NVQ3 in one of the subject areas above.</p> <p>Students without satisfactory mathematical skills will be offered a level 3 mathematics course at Blackburn College which must be successfully completed before they commence studies on the Foundation Degree programme.</p> <p>International applicants International applicants must also meet the College's requirements for study at Level 4 as published at the time of application – the requirements are published on the College website. At the time of validation, this requirement is set at a minimum of IELTS 5.5.</p> <p>English Language Applicants without a level 2 qualification in English must be interviewed and must demonstrate a satisfactory command of English prior to admission.</p>				

		<p>Where the interviewer(s) are not confident that an applicant's command of English is sufficient, offers made may be conditional on successful completion of an English language assessment or qualification prior to entry.</p> <p>Alternative entry routes Applicants without formal qualifications meeting the entry requirements above but with relevant work experience will be considered for entry to the programme subject to an interview.</p> <p>That interview will be conducted by at least two team members and will consider:</p> <ul style="list-style-type: none"> • The applicant's prior formal qualifications • Evidence of the applicant's experience of Computing gained through employment or other verifiable source • Evidence of the applicant's experience of related scientific and/or mathematical disciplines gained through employment or other verifiable source • The level of logical thinking and subject aptitude demonstrated in the interview • The applicant's interest in and enthusiasm for Computing <p>Students will be admitted when the interviewers are confident that the student has demonstrated sufficient prior knowledge, skill, aptitude and interest to be equally able to succeed as a candidate offering the standard entry criteria.</p> <p>In marginal cases where the interviewers are satisfied that the student has the ability to succeed but lacks specific mathematical, scientific, English language and/or study skills offers may be conditional on successful completion of a mathematics bridging course, an English language assessment or qualification, or a summer school.</p> <p>In all cases, the cost of meeting entry requirements will be borne by the applicant.</p>
22.	Work Placement	<p>All students will be required to spend at least 240 hours (120 hours per year) working in a relevant role in order to facilitate the application of theory to practice. This can be the students' paid employment providing it is of relevance to the programme, or via a voluntary 'placement' in a relevant role.</p> <p>The relevant department within the College to ensure suitability will inspect placements, to ensure health and safety criterion are met. This department shall require the insurance details of each organisation prior to the commencement of placement. Each student requires a mentor (from the work setting or placement) to support them regularly face to face, on the phone or by email, and to provide feedback to the Programme Leader with regard to student progress.</p>

		<p>Students who experience difficulty in obtaining a relevant placement are supported to gain effective placement opportunities via the Programme Team in the first instance.</p> <p>In the event that a student cannot undertake a relevant placement, the student will be afforded the opportunity of working on a bespoke internally devised placement or project, or other course work related schemes in which a simulated workplace environment will be created using a variety of live briefs from local industry. In this instance, the Programme Leader or Facilitator of the Work Based Learning sessions will undertake the role of Mentor to that student.</p> <p>Where the internal placement involves a project or work for a particular staff member they will act as the student's client or line manager. For example: work activities that include supporting the Computing department's infrastructure will be supervised by the Computing department's technician.</p>
23.	DBS requirements	None
24.	Other criteria relevant to this programme	Not applicable
25.	Recognition of Prior Learning / Exemptions	Any cases will be considered in line with the University's AP(E)L policy.
26.	Opportunities for progression	<p>Progression to the Lancaster University BSc (Honours) Computing top-up programme (Level 6) will be offered to students who complete their studies with an overall grade profile of Pass and above.</p> <p>Progression into suitable employment within the industry will also be a valid route for students to take. Students can progress to a diverse range of professions, including Software developer, Business analysts, Web developer, Project manager, Network designer and Games developer.</p>
27.	Summary of learning, teaching and assessment strategy	<p>The teaching, learning and assessment modes throughout the programme will mirror those expected for Foundation Degrees as outlined in the Quality Assurance Agency Subject Benchmark Statement for Computing (2007) and the QAA Foundation Degree Characteristics Statement (2015)</p> <p>The learning teaching and assessment strategy is focused around the following underpinning themes:</p> <ul style="list-style-type: none"> • A strong emphasis on the development of students' ability to engage in critical thinking, academic articulation, problem solving and professional practice; • A focus on providing students with a breadth of core skills and knowledge in both software and hardware, informed by strong communications with industry; • On-going commitment to enhancing the student experience through formative and summative assessment and feedback, and personal support mechanisms;

		<ul style="list-style-type: none"> • Use of flexible and appropriate learning methods and materials, to support a range of course access and individual diversity needs. <p>To achieve this the programme has selected a well-balanced and carefully considered range of module topics. The programmes aim to develop well-rounded students both fit for local business needs and with potential to engage with specialised topics at higher levels of education. Each modules delivery and assessment strategy is focused around the development of the above qualities and through effective engagement with industry give students a strong work-related experience in terms of the activities they undertake throughout the programme.</p> <p>The delivery and assessment strategies reflect the practical aspects of computing with a strong emphasis on laboratory work and implemented solutions for assessments. Assessments will be expected to adhere to best practice and industry standards where applicable, again emphasising a focus on preparing for work.</p> <p>Theoretical aspects of the programme will utilise lectures for delivery and seminars for discussions. Such activities will focus on enabling students to develop critical thinking and ability to articulate ideas.</p> <p>All modules will provide students with ample opportunities to question and gain feedback. Assignments have been designed to include a formative aspect, where applicable, with opportunities for draft reviews and peer feedback on approaches taken. Summative grades are generated from well-defined criteria, which are clearly linked to the modules learning outcomes.</p> <p>The Virtual Learning Environment (MOODLE) will be utilised throughout the programme as a mechanism for providing flexibility, encouraging debate and discussion through blogs and forums and one to one tutorials and feedback. Students will also be actively encouraged to contribute to resource sharing their findings and discussing their approaches to tackling problems and generating solutions.</p>
28.	Learning and teaching methods used	<ul style="list-style-type: none"> • Lectures • Workshops • Demonstrations • Online training (video) • Distance and e-learning (via VLE), • Simulations • Seminars • Live briefs • Competitions • Field Visits • Research visits
29.	Assessment methods used	<ul style="list-style-type: none"> • Examinations • In class tests • Portfolios

		<ul style="list-style-type: none"> • Solution implementation • Essays • Reports • Group presentations • Practical demonstrations of products • Projects • Peer assessment • Group assessment
30.	Support for students and their learning	<p>Support is offered via:</p> <ul style="list-style-type: none"> • Induction • Diagnostic Assessment (Developmental Needs Analysis) • Nominated Personal Tutor • Individual Tutorials • Group tutorials • Student Support Team • Early Intervention Tutorials • Monitoring of attendance • Library and learning resources • Online resources including the use of Virtual Learning Environments <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.	Mechanism for review and evaluation of teaching, learning, assessment, the curriculum and outcome standards	<p>The following instruments are used in assessing fitness for purpose:</p> <ul style="list-style-type: none"> • Learning, Teaching and Assessment Committee – HE • School Board • Programme Committee • Analysis of data on retention, achievement and progression • Peer Observation of Teaching • Annual Programme Review Reports • Programme Consultant’s meetings and reports • External Examiner’s visits and reports
32.	Mechanism for gaining student feedback on the quality of teaching and the learning experience	<ul style="list-style-type: none"> • Programme Committee • Module evaluation questionnaires • National Student Survey • Personal tutorials • Module tutor review • Spontaneous student feedback
33.	Committees with responsibility for monitoring and evaluating quality and standards	<ul style="list-style-type: none"> • Academic Board • Learning, Teaching and Assessment Committee – HE • School Board • Programme Committee • Examination Boards including External Examiners from other HE institutions
34.	Regulation of assessment	All programme work assessment briefs will include details of:

		<ul style="list-style-type: none"> • The learning outcomes covered by the assignment; • The extent of the coverage of these outcomes; • The tasks to be completed; • Indicative grading criteria; • The author and verifier of the assignment. <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>Where students with disabilities or underlying medical conditions believe that forms of assessment unfairly disadvantage them, an equivalent alternative assessment will be considered by the tutor and the disability team through discussions with the student. This is moderated by the module leader based on the options being able to meet the learning outcomes of the module and highlighting equivalency across the student submissions. The instructions provided 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 Chapter four of the College Academic Regulations. First marking of assignments is carried out by the module tutor. A sample is then second marked in line with the above strategy and made available for moderation at the end of the semester. The Head of School acts as Lead Internal Moderator and has oversight of the process and final agreed marks.</p> <p>These samples are then made available for final consideration of grades by the External Examiner. External examiners will be entitled to require students to make presentations of their work before final moderation of marks.</p> <p>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>
35.	Role of the Programme Consultant	Programme Consultants will advise the programme team on the design, delivery and the approach to assessment on the programme

36.	Role of the External Examiner	External Examiners will advise the Assessment Board on matters of standards and fairness of the assessment process and if necessary offer advice on individual 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 shall report on the robustness of assessment procedures and standards of student performance, drawing comparison of those standards with similar programmes.
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