Programme Specification

COM-Tu-2019: Computer Science and Digital Technologies

LU Bachelor of Science with Honours (Top-up) awarded by Lancaster University (FHEQ Level 6)

Programme Status: Approved | Version: 1

Introduction

This programme specification provides a summary of the main features of the Computer Science and Digital Technologies 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-Tu-2019
Programme Title	Computer Science and Digital Technologies
Teaching Institution	Blackpool and The Fylde College
Professional, Statutory and Regulatory Body (PSRB) Accreditation	None
UCAS Code	TBC
Language of Study	English
Version	1
Approval Status	Approved
Approval Date	18 June 2019
JACS Code	J900: Others in technology (J900)
Programme Leader	Christopher Willitts

Programme Awards			
Award	**Award Type**	**Level**	**Awarding Body**
LU Bachelor of Science with Honours (Top-up)	Honours Top-up Degree (120 credits)	Level 6	Lancaster University

Programme Overview

Computer Science covers a wide range of skills needed to work in this ever changing and growing market. Software development is a driving force behind the games industry and application development, both of which have seen a dramatic increase over the last decade. As the world evolves, creating a demand for connected services, voice activated devices, internet enabled technology in networking, security and big data are becoming high demand skills. Job demand across the digital sector is expected to grow over the next 5 years seeing over 1 million new UK jobs by 2020. The college is excellently positioned to prepare graduates for these positions. We are currently the first college in the UK to gain accreditation for our Honours degrees by the British Computer Society, in addition to Tech Partnership accreditation for our degree apprenticeships. We continually update our programmes based on industry demand and through close employer links ensure that our degrees remain at cutting edge and industry focused, providing you with the best opportunities to meet these local, national and international demands.

On this programme you will expand on the practical skills gained through the foundation skills by exploring theories and technologies related to cyber ethics, distributed systems, big data and data analytics. All the skills and knowledge gained from your foundation degree in addition to the top-up will conclude with the final dissertation, where you will undertake a development project related to your specialised research topic. You will be supported through this by your assigned dissertation supervisor.

Some key elements of the programme include:

- Exploration of ethical philosophies and computer law
- Identification of cyber ethics in industry
- Analysis of data representation and programming concepts
- Exploration of middleware solutions
- Analysis of security and encryption
- Analyse advanced analytics focussing on modern tools and techniques
- Use of modern developing tools and techniques

Admission Criteria

Entry requirements for the BSc (Hons) Computer Science and Digital Technologies top up is based on successful achievement of the B&FC FdSc Computer Science and Digital Technologies.

Career Options and Progression Opportunities

Career opportunities that graduates of this programme could successfully pursue include:

- Web Developer
- Data Analyst
- Data Scientist
- Cyber Security Analyst
- Network Engineer
- IT Technician
- Network Engineer
- Software Developer
- Application Developer

There are also progression opportunities onto post graduate studies at other universities including our partnership university, Lancaster University.

Programme Aims

- To develop knowledge and skills to enable students to formulate managerial and strategic decisions in multiple contexts based upon development of systems and data analysis techniques

- To provide the opportunity to accurately deploy established techniques of critical analysis and enquiry in computer science disciplines

- To develop conceptual understanding that enables students to devise, develop and sustain arguments, using ideas and techniques from research and the wider subject discipline

- To enable students to manage their own learning and to make use of scholarly reviews and primary sources

- To build students' ethical, social and professional understanding in digital industries within a

global context.

Programme Learning Outcomes

Level 6

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

1. Propose solutions, ideas, concepts or arguments both collaboratively and independently, continually applying critical judgement while exercising relevant techniques and transferable skills throughout the production of systems and use of big data.
2. Utilise convergent and divergent thinking to produce effective solutions to relevant, contemporary industry-related problems through observation, investigation, speculative enquiry and visualisation.
3. Critically appraise the impact of professional, economic, social, environmental, moral and ethical issues involved when designing, developing, testing and evaluating hardware, software and systems infrastructure, applying professional, ethical and legal practices.
4. Undertake critical self-appraisal and manage own learning and development, identifying the need for continuing professional development and lifelong learning.
5. Produce work including problem identification, analysis, design, development, testing and critical evaluation of complex systems, demonstrating the reasoning behind the proposed solution and the relationship between the different stages of the development life cycle.

Programme Structure

Pathway	Module	Level	Credits	Coursework	Practical	Written Exam
Stage 1 Stage exit award: LU Bachelor of Science (Honours) (Awarded by Lancaster University)						
All	CMP601: Dissertation (Mandatory)	6	40	100%		
	COM603: Advanced Data Analytics (Mandatory)	6	20	100%		
	COM604: Internet of Things (Mandatory)	6	20	100%		
	NET601: Cyber Ethics and Law (Mandatory)	6	20	60%		40%
	NET602: Distributed Systems (Mandatory)	6	20	100%		

Course Options

There are no optional modules on this programme.

Study Workload

Timetabling for our programmes in Computing is done to ensure that other commitments can be met, with most of our full-time HE programmes requiring one day and one evening of attendance. Where there are multiple groups, priority choice will be given to those with outside commitments, for example employment and childcare. 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 152 hours per module, which equates to 9.5 hours per week, per module. 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

The course is delivered in a variety of ways, with resources and taught materials available through Moodle; our online Virtual Learning Environment (VLE). You will have access to a wide range of multimedia resources which will support you in working at a pace that suits you. Workshops will be available to support you in your dissertation and development sessions; discussions and lectures will support the more theoretical elements along with the analysis of case studies which will support you in the exploration of concepts theories and techniques. Remote systems will provide access to college software and virtualised networks from home. Alongside the theoretical and practical skills gained, there will be a clear building of graduate skills such as team working, communication, reflection and analysis, which are essential for working in this sector. Through reflective practice and professional development, you will broaden your employability skills. Additionally, guest speakers will be invited into college to discuss current industry practice with you which could support you with your assessment briefs. Our staff are also approachable and friendly, operating an open door policy and through structured progress meetings you will have access to a progress tutor that will support you through your academic journey.

Programme Delivery: Assessment

Formative assessment is provided on a regular basis allowing you to submit practice tasks and drafts. This will allow you to gain feedback to support improvements. All assessments are submitted online through Moodle, allowing you to refer back to any previous feedback you have received at any time, allowing you to progress and build confidence in future submissions.

Assessments will be a combination of reports, essays, design documentation, development, reflective and analytical writing and a developmental project. All assessments are weighed throughout the year to ensure workload is efficient and balanced. More theoretical elements are assessed through written or timed exams with provided scenarios or case study analysis. These will be supported through revision sessions and mock exams which will assist you in your preparation. The Dissertation will include a development in an area of your own choice which could take advantage of a number of evolving digital media technologies.

Programme Delivery: Work Based and Placement Learning

We are in liaison with multiple industry figures and this provides opportunities for live briefs, supported projects, checking of real-world scenarios for assessments and improving our curriculum.

Programme Delivery: Graduate Skill Development

These are the skills that you will develop as a graduate to prepare you for your career and how this programme helps you develop these:

- **A commitment to lifelong learning and career development**
  - Personal and professional development planning throughout the programme so that you can plan for career and skills development including post-graduate study or career opportunities
- **Collaborative teamwork and leadership skills**
  - Team based projects working to established methodologies will aid you in communicating with team members, assuming leadership roles where appropriate, managing group dynamics and working collaboratively towards common goals
- **Personal and intellectual autonomy**
  - We support your development of independence in academic and practical skills through the all levels of the programme
- **Ethical, social and professional understanding**
  - Mapping of course content to British Computer Society criteria for Chartered IT Professionals ensures the programme is current and aligned to professional standards
- **Communication, information and digital literacies**
  - You will develop your use of digital resources such as researching and reflecting through the development of various professional reports, essays and journals developing the skills needed for the digital industry
- **Global citizenship**
  - Localisation concerns for interfaces will be covered so you can build an awareness of how to operate effectively in a global industry
- **Research, scholarship and enquiry skills**
  - The Dissertation will be led and managed by you in an area of your own choosing including significant research and development with limited supervision; this will enable you to independently research unfamiliar concepts effectively
- **Enterprise and entrepreneurial awareness and capabilities**
  - As many skills are developed through this programme, many of these offer the opportunity to explore freelance work and self-employment. Our development studio will help to prepare you for this kind of environment

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. Additionally, all resources are available through remote access making this a more viable option.

There will be a wide range of resources available for you to use when undertaking your dissertation but if you chose a research topic where there is no equipment available, you may be required to supply you own.

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 (App Development) which focuses on software engineering practices and more ‘under the hood’ disciplines including native iOS and Android development. The Software Engineering (Game Development) variant includes the production of 2D and 3D games using industry standard APIs with custom code and also with licensed engines such as Unreal. The Network Engineering programme includes specialist streams in Systems Administration and Cyber Security which embeds Cisco CCNA content. Finally we offer a Web Technologies and Digital Media degree which focuses on the development of fully function front end and back end web development.

We also have a range of specialist degree apprenticeship routes through our Tech Partnership accredited Digital Technology Solutions programme with Network Engineer, Software Engineer and Cyber Security Analyst pathways. These programmes require employment in a related sector / job role due to the integrated work-based nature of the programmes.

This programme provides opportunities for postgraduate study at other institutions. Our partners Lancaster University are very well respected in Computing and innovative technologies particular in the area of distributed systems and cyber security.