LIVERPOOL JOHN MOORES UNIVERSITY

Programme Specification Document

Approved, 2022.02

Overview

Programme Code	36421
Programme Title	Computing
Awarding Institution	Liverpool John Moores University
Programme Type	Degree
Language of Programme	All LJMU programmes are delivered and assessed in English
Programme Leader	Denis Reilly
Link Tutor(s)	

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Bachelor of Science with Honours (SW) - SBSH	See Learning Outcomes Below
Recruitable Target	Bachelor of Science with Honours - BSH	See Learning Outcomes Below
Alternative Exit	Certificate of Higher Education - CHE	Develop computer programs using elementary programming constructs. Discuss computer systems at the hardware, software and network levels. Understand the different approaches required to solve computer-based problems. Discuss a range of practical aspects of computing and apply the associated tools and techniques. Identify a personal development plan to support their career path and recognise ethical, legal and professional aspects that relate to the computing profession. Design and develop a website using appropriate tools and techniques. Understand of the basics of data modelling and abstraction. Communicate their ideas and take personal responsibility for their learning.
Alternative Exit	Bachelor of Science - BS	Demonstrate a broad and comparative knowledge of the general scope of the subject, its different areas and applications, and its interactions with related subjects. A detailed knowledge of a defined subject or a more limited coverage of a specialist area balanced by a wider range of study. In each case, specialised study will be informed by current developments in the subject. Demonstrate a critical understanding of the essential theories, principles and concepts of the subject(s) and of the ways in which these are developed through the main methods of enquiry in the subject.
Alternative Exit	Diploma of Higher Education - DHE	Critically analyse the requirements of a business system using structured techniques. Critically evaluate and apply ethical theories to IT activities. Understand and explain the fundamentals of data analytics. Understand computer networking techniques and apply them to the design of computer networks. Develop a logical schema and create and manipulate data using a database management system. Understand and apply basic research skills in order to critique and review existing research and plan new research. Understand and apply advanced web development techniques and tools. Identify and demonstrate their employability skills.
Alternative Exit	Diploma in Higher Education (SW) - SDHE	Critically analyse the requirements of a business system using structured techniques. Critically evaluate and apply ethical theories to IT activities. Understand and explain the fundamentals of data analytics. Understand computer networking techniques and apply them to the design of computer networks. Develop a logical schema and create and manipulate data using a database management system. Understand and apply basic research skills in order to critique and review existing research and plan new research. Understand and apply advanced web development techniques and tools. Identify and demonstrate their employability skills. A student who successfully completes a placement year will be eligible for the Sandwich award and will, in addition to the above, be able to demonstrate the professional and personal skills necessary for effective employment within a professional environment.

Alternative Exit	Bachelor of Science (SW) - SBS	Demonstrate a broad and comparative knowledge of the general scope of the subject, its different areas and applications, and its interactions with related subjects. A detailed knowledge of a defined subject or a more limited coverage of a specialist area balanced by a wider range of study. In each case, specialised study will be informed by current developments in the subject. Demonstrate a critical understanding of the essential theories, principles and concepts of the subject(s) and of the ways in which these are developed through the main methods of enquiry in the subject.

Alternate Award Names	

External Benchmarks

Subject Benchmark Statement	UG-Computing (2022)

Accreditation
Programme Accredited by

PSRB Name	Type of Accreditation	Valid From Date	Valid To Date	Additional Notes
BCS, the Chartered Institute for IT	Accredited by BCS, the Chartered Institute for IT for the purposes of fully meeting the academic requirement for registration as a Chartered IT Professional.			

Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Full-Time, Face to Face	September	LJMU Taught	3 Years
Sandwich Year Out, Face to Face	September	LJMU Taught	4 Years

Aims and Outcomes

Educational Aims of the Programme

The programme aims to produce graduates who are able to play a significant role in the provision of information in a business environment by the development of effective and reliable computer-based systems. The specific aims of the course are as follows: -To understand the underlying concepts, formal foundations and theory of computer-based information systems. -To develop the knowledge, skills and abilities necessary for the investigation, analysis, design and development of large scale software systems. -To provide an educational underpinning that both addresses leading edge developments in the industry and provides for future professional development, equipping students with the appropriate knowledge and skills for a wide variety of employment and/or further study. -To encourage students to engage with the development of employability skills by completing a self-awareness statement. -To encourage students to become advanced autonomous learners. -To further develop students' originality in applying analytical, creative, problem solving and research skills. -To provide advanced, conceptual understanding, underpinning career development, innovation and further study. -For students undertaking a placement year the aim is to provide students with an extended period of work experience at an approved partner that will complement their programme of study at LJMU. This will give the students the opportunity to develop professional skills relevant to their programme of study, as well as attitude and behaviours necessary for employment in a diverse and changing environment.

Learning Outcomes

Code	Description
PLO1	Critically evaluate current and developing principles and practices in selected areas of computer systems technologies.
PLO2	Creatively plan and manage the development of a complex computer system.
PLO3	Implement and evaluate computer software in a wide range of domains.
PLO4	Manage computer systems projects.
PLO5	Work professionally as a member of a team.
PLO6	Apply numerical methods to computing problems involving a quantitative dimension.
PLO7	Communicate complex information effectively by written or verbal means.
PLO8	Identify job roles and opportunities that reflect personal interest and expertise.
PLO9	Plan and manage personal learning and development.
PLO10	Apply a wide and deep range of conceptual and practical knowledge and skills in selected areas of computer systems, in a wide range of domains.
PLO11	Utilise a range of tools and techniques used in the development of complex computer systems.
PLO12	Critically analyse a range of computer systems and application domains.
PLO13	Effectively and creatively manage a complex computer system.
PLO14	Use knowledge with originality and be innovative in solving computer systems problems.
PLO15	Deploy systematic and comprehensive knowledge and understanding of computer systems concepts, principles and theories to computing problems.

Code	Description
PLO16	Use knowledge with originality in system modelling, requirements analysis and design.
PLO17	Critically evaluate and test a computer-based system.

Programme Structure

Programme Structure Description

The placement year, module 5119COMSCI, will follow Level 5 and students will be enrolled on a 480 credit honours sandwich programme. The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5. Students successfully completing the assessment of the placement year are eligible for a Sandwich award. Students not undertaking a placement year are registered on the non-sandwich version of the programme and will have the opportunity of an additional study year abroad following Level 5. Students will be enrolled on a 480 credit honours with study abroad programme. Of those 480 credits, 120 will be taken via a Level 5 study abroad module 5120COMSCI. The modules to be studied in the host institution must be agreed in advance. The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5.

Programme Structure - 480 credit points	
Level 4 - 120 credit points	
Level 4 Core - 120 credit points	CORE
[MODULE] 4200COMP Introduction to Programming Approved 2022.03 - 20 credit points	
[MODULE] 4201COMP Computer Systems Approved 2022.01 - 20 credit points	
[MODULE] 4202COMP Networks and Web Development Approved 2022.01 - 20 credit points	
[MODULE] 4203COMP Professional Practice Approved 2022.03 - 10 credit points	
[MODULE] 4204COMP Data Modelling Approved 2022.01 - 10 credit points	
[MODULE] 4210COMP Fundamentals of Information Systems Approved 2022.02 - 20 credit points	
[MODULE] 4211COMP Problem Solving for Computing Approved 2022.02 - 20 credit points	
Level 5 - 480 credit points	
Level 5 Core - 120 credit points	CORE
[MODULE] 5200COMP Group Project Approved 2022.01 - 20 credit points	
[MODULE] 5201COMP Computer Networks Approved 2022.02 - 20 credit points	
[MODULE] 5202COMP Database Systems Approved 2022.01 - 20 credit points	
[MODULE] 5213COMP Information Systems Development Approved 2022.01 - 20 credit points	
[MODULE] 5214COMP Advanced Web Development Approved 2022.01 - 20 credit points	
[MODULE] 5224COMP Data Analytics Approved 2022.02 - 20 credit points	
Optional placement - 120 credit points	OPTIONAL
Placement Year - 120 credit points	OPTIONAL
[MODULE] 5119COMSCI Sandwich Year - Computing Approved 2022.01 - 120 credit points	
OR Study Abroad - 120 credit points	OPTIONAL
[MODULE] 5120COMSCI Study Year Abroad - Computing Approved 2022.01 - 120 credit points	
Level 6 - 120 credit points	
Level 6 Core - 60 credit points	CORE
[MODULE] 6200COMP Project Approved 2022.01 - 40 credit points	
[MODULE] 6211COMP Advanced Information Systems Approved 2022.01 - 20 credit points	
Level 6 Optional - 60 credit points	OPTIONAL
[MODULE] 6209COMP Business Intelligence Approved 2022.01 - 20 credit points	
[MODULE] 6210COMP User Experience Design Approved 2022.01 - 20 credit points	
[MODULE] 6212COMP E-Commerce Systems Approved 2022.01 - 20 credit points	
[MODULE] 6213COMP Network Defence Approved 2022.01 - 20 credit points	
[MODULE] 6214COMP Advanced Networking Approved 2022.01 - 20 credit points	

Module specifications may be accessed at https://proformas.ljmu.ac.uk/Default.aspx

Teaching, Learning and Assessment

Core knowledge and understanding is acquired via lectures, tutorials, practical work, workshops and guided independent study. Independent study is used where appropriate resource material is available and increases as the programme progresses. Students are given feedback on all work produced. Assessment methods are specified in each module specification. All learning outcomes in a module are assessed and the type of assessment specified for each outcome. Each module is assessed by examination and/or course work. The nature of the course work varies for each module. Cognitive skills are developed throughout the programme via tutorial, group discussion, teamwork, coursework, projects and presentations. Assessment of cognitive skills is through written examinations, laboratory work, coursework reports, project work, reports and presentations. Practical skills are developed throughout the programme. Coursework and projects are designed to provide practical opportunities for students to work independently or in groups. Assessment of practical skills is normally by coursework and projects. The placement year is assessed, by portfolio, on a pass / fail basis. Key skills are developed throughout the programme in a variety of forms. Specifically through a combination of research related coursework, guided independent study and projects, examinations, group work and presentations. Key skills are assessed as part of coursework, projects, written examinations and presentations.

Opportunities for work related learning

Level 4: 4203COMP Professional Practice - this module provides students with an opportunity to consider their future role as a computing professional and develop a plan to enable them to progress in their chosen career. Level 5: 5200COMP Group Project – this module provides further insight into developing the role of the student becoming a computing professional. Students will be encouraged to become student members of appropriate professional bodies for the computing industry (e.g. ACM, IEEE or BCS) as part of their development. 5119COMSCI Sandwich Year Computing - The aim is to provide students with an extended period of work experience at an approved partner that will complement their programme of study at LJMU. This will give students the opportunity to develop professional skills relevant to their programme of study as well as the attitude and behaviours necessary for employment in a diverse and changing environment.

Entry Requirements

Type	Description
Alternative qualifications considered	Qualifications deemed equivalent to the above upon completion of appropriate assessment will be considered acceptable. Applicants should have five GCSE (or equivalent) passes of at least grade C including Mathematics and English (or IELTS 6.0).
Other international requirements	Applicants offering other awards will be considered on an individual basis in line with the agreed entry criteria. All applicants should have achieved IELTS 6 or equivalent.
BTECs	BTEC Extended Diploma To the value of 112 UCAS points. BTEC Diploma / 90 Credit Diploma / Subsidiary Diploma /Certificate To the value of 112 UCAS points when combined with other qualifications.
A levels	Applicants should have or expect to obtain a total of 112 UCAS points with a maximum of 20 points from AS level qualifications.
International Baccalaureate	Applicants should have or expect to obtain a total of 112 UCAS points overall.

Extra Entry Requirements