Programme Specification Document

Approved, 2022.02

Overview

Programme Code	36742
Programme Title	Computer Science
Awarding Institution	Liverpool John Moores University
Programme Type	Degree
Language of Programme	All LJMU programmes are delivered and assessed in English
Programme Leader	
Link Tutor(s)	Abdennour El Rhalibi

Partner Name	Partnership Type
Education Centre of Australia Pty Ltd	Franchised

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	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 and software 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	Diploma of Higher Education - DHE	Understand the practical application of computer science. Use formal methods and the scientific principles of programming and correctness. Appreciate the fundamentals of algorithm and language design. Understand relationships, and their relevance to databases, whilst also being able to create and maintain a database. Identify the professional skills required within the computing industry. Demonstrate a range of skills including problems-solving as an individual or as part of a group.

Alternate Award Names	

External Benchmarks

Subject Benchmark Statement	UG-Computing (2022)

Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Part-Time, Distance Learning	April	Education Centre of Australia Pty Ltd	4 Years
Part-Time, Distance Learning	September	Education Centre of Australia Pty Ltd	4 Years

Aims and Outcomes

Educational Aims of the Programme

The overall aim of the course is to provide a balanced, integrated and practical based education in all aspects of computing and the underlying science behind it for utilisation in organisations where IT and computing is a major activity. The specific aims of the course are as follows: -To provide students with a full, systematic understanding of current and developing Computer Science. -To enable the student to acquire the skills needed in applying computer science to practical development. -To bring the student to an understanding of the mathematical and scientific concepts that underpin modern computing. -To encourage students to fully engage with the development of employability skills by completing a self-awareness statement. -To enable students to explore the issues surrounding Computer Science in Industrial contexts. -To facilitate students in the development of expertise and interest in topic areas of direct and complementary relevance to their work or planned career. -To encourage students to become advanced autonomous learners. -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	Be critically aware of current and developing principles and practices within Computer Science.
PLO2	Specify a complex computer-based system.
PLO3	Deploy a wide range of appropriate computing tools, facilities and techniques to solve a computing problem.
PLO4	Work professionally as a member of a team.
PLO5	Deploy a wide range information technology for effective information retrieval.
PLO6	Apply numerical and formal methods to computing problems involving a quantitative dimension.
PLO7	Communicate complex information effectively by written or verbal means.
PLO8	Apply conceptual and practical knowledge and skills to Computer Science problems.
PLO9	Use a range of advanced tools and techniques used in the specification of complex computer based systems.
PLO10	Critically analyse a range of software development domains.
PLO11	Plan and manage an IT project.
PLO12	Plan, conduct and report a research project.
PLO13	Implement systematic and comprehensive knowledge and understanding of Computer Science concepts, principles and theories.
PLO14	Use knowledge with originality in system modelling, requirements analysis and design.
PLO15	Critically evaluate and test a computer-based system.

Programme Structure

Programme Structure Description

Programme Structure - 360 credit points	
Level 4 - 120 credit points	
Level 4 Core - 120 credit points	CORE
[MODULE] 4500COMECA Introduction to Programming Approved 2022.01 - 20 credit points	
[MODULE] 4501COMECA Computer Systems Approved 2022.01 - 20 credit points	
[MODULE] 4503COMECA Professional Practice Approved 2022.01 - 10 credit points	
[MODULE] 4504COMECA Data Modelling Approved 2022.01 - 10 credit points	
[MODULE] 4515COMECA Foundations of Computer Science Approved 2022.01 - 20 credit points	
[MODULE] 4516COMECA Computer Science Workshop Approved 2022.01 - 20 credit points	
[MODULE] 4522COMECA Introduction to Web Development Approved 2022.01 - 20 credit points	
Level 5 - 120 credit points	
Level 5 Core - 100 credit points	CORE
[MODULE] 5500COMECA Group Project Approved 2022.01 - 20 credit points	
[MODULE] 5502COMECA Database Systems Approved 2022.01 - 20 credit points	
[MODULE] 5520COMECA Algorithm Design Approved 2022.01 - 20 credit points	
[MODULE] 5522COMECA Knowledge Based Systems Approved 2022.01 - 20 credit points	
[MODULE] 5529COMECA Automata, Languages and Computation Approved 2022.01 - 20 credit points	
Level 5 Optional - 20 credit points	OPTIONAL
[MODULE] 5504COMECA Object-Oriented Systems Approved 2022.01 - 20 credit points	
[MODULE] 5518COMECA Secure Software Development Approved 2022.01 - 20 credit points	
[MODULE] 5524COMECA Data Analytics Approved 2022.01 - 20 credit points	
[MODULE] 5530COMECA Mobile and Web Development Approved 2022.01 - 20 credit points	
Level 6 - 120 credit points	
Level 6 Core - 100 credit points	CORE
[MODULE] 6500COMECA Project Approved 2022.01 - 40 credit points	
[MODULE] 6519COMECA Advanced Topics in AI Approved 2022.01 - 20 credit points	
[MODULE] 6520COMECA Computer Graphics and Visualisation Approved 2022.01 - 20 credit points	
[MODULE] 6521COMECA Contemporary Concepts in Computer Science Approved 2022.01 - 20 credit points	
Level 6 Optional - 20 credit points	OPTIONAL
[MODULE] 6510COMECA User Experience Design Approved 2022.01 - 20 credit points	
[MODULE] 6513COMECA Network Defence Approved 2022.01 - 20 credit points	
[MODULE] 6529COMECA Applied Data Science 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 online lectures, tutorials, coursework, projects and guided independent study. Students are given feedback on all work produced. Assessment methods for the knowledge and understanding are specified in module specifications. Each module is assessed by coursework or online exam. Specifically, the assessment takes the form of written assessments, coursework reports and/or project work, reports and presentations. Cognitive skills are developed throughout the programme via online tutorial, group discussion, teamwork, coursework, projects and presentations. Specifically, it is developed through tutorial group discussion, teamwork, coursework, projects, and presentations. Assessment of cognitive skills is through 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. 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, group work and presentations.

Opportunities for work related learning

Level 4: 4503COMECA 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: 5500COMECA 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.

Entry Requirements

Type	Description
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.
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. Australia: Applicants require 85 points in ATAR or 8 points in OP India: Applicants require a Higher Secondary Certificate / Standard 12 / Indian School Certificate (Year 12) OR All India Senior School Certificate Examination with a minimum of 65% overall (60% in Maths and your chosen subject and 70% in English) 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.
International Baccalaureate	Applicants should have or expect to obtain a total of 112 UCAS points overall.

Extra Entry Requirements