

Computer Science

Programme Information

2022.01, Approved

Overview

Programme Code	36395
Programme Title	Computer Science
Awarding Institution	Liverpool John Moores University
Programme Type	Top-up

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Bachelor of Science with Honours - BSH	N/A
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. Use object-oriented design in formulating an implementation. 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 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.

Alternate Award Names	
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Partner Name	Partnership Type
Oryx Universal College WLL	Franchised

External Benchmarks

Subject Benchmark Statement	UG-Computing (2019)
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Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length Programme Length Unit
Full-Time, Face to Face	January	Oryx Universal College WLL	4 Years
Full-Time, Face to Face	September	Oryx Universal College WLL	4 Years

Aims and Outcomes

Educational Aims of the Programme	<p>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. -To provide students with a comprehensive understanding, critical awareness and ability to conduct evaluation of current Computer Science research issues. -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.</p>
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Learning Outcomes

Code	Number	Description
PLO1	1	Be critically aware of current and developing principles and practices within Computer Science.
PLO2	2	Use such knowledge with originality in system modelling, requirements analysis and design.
PLO3	3	Perform critical evaluation and testing for a computer-based system.
PLO4	4	Deploy appropriate methods and tools creatively for the specification of a complex computer-based system.
PLO5	5	Apply appropriate research methods critically to conduct original Computer Science related research.
PLO6	6	Develop and evaluate Computer Science projects.
PLO7	7	Manage Computational projects.
PLO8	8	Use a wide range of computing tools, facilities and techniques effectively.
PLO9	9	Work individually and/or as a team member.
PLO10	10	Use information technology, e.g. Computer Science tools.
PLO11	11	Apply numerical and formal methods skills to cases involving a quantitative dimension.

PLO12	12	Have widened and deepened conceptual and practical knowledge and skills in the areas of Computer Science.
PLO13	13	Communicate effectively by written or verbal means.
PLO14	14	Plan and manage learning and development.
PLO15	15	Have been exposed to and applied a range of advanced tools and techniques used in the specification of complex computer based systems.
PLO16	16	Have critically analysed a range of development domains.
PLO17	17	Have a clear understanding of how to effectively and creatively manage Computer Science projects.
PLO18	18	Use knowledge with originality and be innovative in Computer Science.
PLO19	19	Comprehensively and critically understand current research issues in the relevant aspects of Computer Science.
PLO20	20	Study independently at an advanced level and have developed effective methodology skills for original research.
PLO21	21	Demonstrate systematic and comprehensive knowledge and understanding of Computer Science concepts, principles and theories.

Course Structure

Programme Structure Description	<p>Normally entry to this programme will be at level 6 and the programme will be studied over two years. Entry to this programme will be permitted if an applicant can demonstrate that they have achieved the learning outcomes for levels 4 and 5 of the Oryx delivered, LJMU validated, BSc(Hons) full time programme, code 36394. Candidates will apply to Oryx who will advise whether entry may be given. Oryx will then map the qualification the applicant has previously been awarded to ensure that it is equivalent to 120 level 4 and 120 level 5 credits, and that the curriculum adequately maps against the full time programme curriculum. Applications will be sent to LJMU via the Link Tutor, who will submit them to the Faculty Recognition Group (FRG). If FRG approve the application, the applicants can be offered a place on the programme. Exceptionally, entry to level 5 of the programme will be allowed if a candidate can demonstrate that they have previously achieved the equivalent of 120 level 4 credits, mapped against level 4 of programme 36394. If entry is at level 5, the programme duration will be 4 years on a part time basis. This programme will be studied in part time mode. For level 6: Modules 6519CSQR, 6520CSQR and 6521CSQR will be delivered in the first stage of the part time programme. Modules 6522CSQR and 6500CSQR be delivered in the second stage of the part time programme. For level 5: Modules 5500CSQR, 5501CSQR, 5502CSQR and 5504CSQR will be delivered in the first stage of the part time programme. Modules 5520CSQR, 5521CSQR and 5522CSQR will be delivered in the second stage of the part time programme.</p>
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Programme Structure - 240 credit points	
Level 5 - 120 credit points	
Level 5 Core - 120 credit points	CORE
[MODULE] 5501CSQR Professional Issues Approved 2022.01 - 10 credit points	
[MODULE] 5522CSQR Knowledge-Based Systems Approved 2022.01 - 20 credit points	
[MODULE] 5504CSQR Object Oriented Systems Development Approved 2022.01 - 20 credit points	
[MODULE] 5520CSQR Algorithm Design Approved 2022.01 - 20 credit points	
[MODULE] 5521CSQR Compiler Design Approved 2022.01 - 20 credit points	
[MODULE] 5500CSQR Research Skills Approved 2022.01 - 10 credit points	
[MODULE] 5502CSQR Database Systems Approved 2022.01 - 20 credit points	
Level 6 - 120 credit points	
Level 6 Core - 120 credit points	CORE
[MODULE] 6522CSQR Virtualised Computing Architectures Approved 2022.01 - 20 credit points	
[MODULE] 6500CSQR Project Approved 2022.01 - 40 credit points	
[MODULE] 6519CSQR Computer Science Applications Approved 2022.01 - 20 credit points	
[MODULE] 6520CSQR Graphics and Data Visualisation Approved 2022.01 - 20 credit points	
[MODULE] 6521CSQR Parallel Algorithms Approved 2022.01 - 20 credit points	

Teaching, Learning and Assessment

Teaching, Learning and Assessment	<p>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. Specifically, acquisition of 1 is via a combination of lectures, projects, seminars, and guided independent study. Acquisition of 2, 3, 4, 5 and 6 is via a mixture of lectures, tutorials, laboratory work, coursework, and projects. Acquisition of 7 and 8 is via lectures, coursework, projects, seminars, and guided independent study. 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. Specifically, skill 1 is developed through tutorial group discussion, teamwork, coursework, projects, and presentations. Skills 2, 3 and 4 are developed through laboratory work, coursework, and projects. Skill 5 is developed through coursework, projects, and guided independent study. Assessment of cognitive skills is through written examinations, laboratory work, coursework reports, project work, reports and presentations. Specifically, written examinations (1, 2), laboratory work (2-4), coursework reports (1-5), and/or project work, reports and presentations (1-5). Practical skills are developed throughout the programme. Coursework and projects are designed to provide practical opportunities for students to work independently or in groups. Specifically, skills 1, 2 and 3 are developed through laboratory work, coursework, and project work. Skill 4 is developed through individual and group coursework, laboratory work, and project work. 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. Skill 1 is developed through a combination of research-related coursework, guided independent study, and projects. Skill 2 is developed through study of technical methods, examinations, coursework, and projects. Skill 3 is developed through report writing for coursework and projects, written examinations, teamwork, presentations, and group discussion. Skill 4 is developed via the management of learning tasks and deadlines for coursework and projects. Key skills are assessed as part of coursework (1-4), projects (1-4), written examinations (2,3) and presentations (3).</p>
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Opportunities for work related learning

Opportunities for work related learning
<p>This programme will be studied by students that are already working in the IT industry and as such they will be able to apply the knowledge they have obtained in the workplace to their studies. Work-related learning is also included within this programme, so students will have the opportunity to engage in real world projects and activities Work-related learning may take different forms, the most common being simulations of workplace activity; and employer-driven case studies.</p>

Entry Requirements

Type	Description
Other international requirements	<p>Entry to level 6 of the programme will be permitted if an applicant can demonstrate that they have achieved the learning outcomes for levels 4 and 5 of the Oryx delivered, LJMU validated, BSc(Hons) full time programme, code 36394. Exceptionally, entry to level 5 of the programme will be allowed if a candidate can demonstrate that they have previously achieved the equivalent of 120 level 4 credits, mapped against level 4 of programme 36394. English language: IELTS 6.0 overall with a minimum 5.5 in each component. Any English qualifications that are different from the above, but are equivalent will be accepted if Oryx can provide evidence of equivalence. The Faculty Recognition Group will review the evidence and agree this equivalence before students are admitted onto the programme.</p>

Programme Contacts

Programme Leader

Contact Name

Link Tutor

Contact Name

Syed Naqvi
