Computer Science

Programme Information

2022.01, Approved

Overview

Programme Code	36394
Programme Title	Computer Science
Awarding Institution	Liverpool John Moores University
Programme Type	Degree

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Bachelor of Science with Honours - BSH	N/A
Alternative Exit	Certificate of Higher Education - CHE	Develop computer programs using elementary programming constructs. Develop computer programs using elementary programming constructs. Discuss computer systems at the hardware and software levels. Discuss computer systems at the hardware and software levels. Understand the different approaches required to solve computer-based problems. 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. 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. 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. Design and develop a website using appropriate tools and techniques. Understand of the basics of data modelling and abstraction. Understand of the basics of data modelling and abstraction. Communicate their ideas and take personal responsibility for their learning. 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	

Partner Name	Partnership Type
Oryx Universal College WLL	Franchised

External Benchmarks

Subject Benchmark Statement	UG-Computing (2019)

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	3 Years
Full-Time, Face to Face	September	Oryx Universal College WLL	3 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.

Learning Outcomes

Code	Number	Description
PLO1	1	Be critically aware of current and developing principles and practices within Computer Science.
PLO2	2	Specify a complex computer-based system.
PLO3	3	Deploy a wide range of appropriate computing tools, facilities and techniques to solve a computing problem.
PLO4	4	Work professionally as a member of a team.
PLO5	5	Deploy a wide range information technology for effective information retrieval.
PLO6	6	Apply numerical and formal methods to computing problems involving a quantitative dimension.
PLO7	7	Communicate complex information effectively by written or verbal means.
PLO8	8	Apply conceptual and practical knowledge and skills to Computer Science problems.
PLO9	9	Use a range of advanced tools and techniques used in the specification of complex computer based systems.
PLO10	10	Critically analyse a range of software development domains.
PLO11	11	Plan and manage an IT project.
PLO12	12	Plan, conduct and report a research project.

PLO13	13	Implement systematic and comprehensive knowledge and understanding of Computer Science concepts, principles and theories.
PLO14	14	Use knowledge with originality in system modelling, requirements analysis and design.
PLO15	15	Critically evaluate and test a computer-based system.

Course Structure

Programme Structure Description	The programme will be studied in full time mode. Students joining Level 6 prior to September 2023 will follow the previously validated structure.

Programme Structure - 360 credit points	
Level 4 - 120 credit points	
Level 4 Core - 120 credit points	CORE
[MODULE] 4500CSQR Introduction to Programming Approved 2022.01 - 20 credit points	
[MODULE] 4501CSQR Computer Systems Approved 2022.01 - 20 credit points	
[MODULE] 4504CSQR Data Modelling Approved 2022.01 - 10 credit points	
[MODULE] 4516CSQR Computer Science Workshop Approved 2022.01 - 20 credit points	
[MODULE] 4523CSQR Foundations of Computer Science Approved 2022.01 - 20 credit points	
[MODULE] 4524CSQR Professional Practice Approved 2022.01 - 10 credit points	
[MODULE] 4525CSQR Introduction to Web Development Approved 2022.01 - 20 credit points	
Level 5 - 120 credit points	
Level 5 Core - 100 credit points	CORE
[MODULE] 5502CSQR Database Systems Approved 2022.01 - 20 credit points	
[MODULE] 5520CSQR Algorithm Design Approved 2022.01 - 20 credit points	
[MODULE] 5522CSQR Knowledge-Based Systems Approved 2022.01 - 20 credit points	
[MODULE] 5529CSQR Automata, Languages and Computation Approved 2022.01 - 20 credit points	
[MODULE] 5530CSQR Group Project Approved 2022.01 - 20 credit points	
Level 5 Optional - 20 credit points	OPTIONAL
[MODULE] 5504CSQR Object Oriented Systems Development Approved 2022.01 - 20 credit points	
[MODULE] 5518CSQR Secure Software Development Approved 2022.01 - 20 credit points	
[MODULE] 5524CSQR Data Analytics Approved 2022.01 - 20 credit points	
[MODULE] 5531CSQR Mobile and Web Development Approved 2022.01 - 20 credit points	
Level 6 - 120 credit points	
Level 6 Core - 100 credit points	CORE
[MODULE] 6500CSQR Project Approved 2022.01 - 40 credit points	
[MODULE] 6520CSQR Graphics and Data Visualisation Approved 2022.01 - 20 credit points	
[MODULE] 6523CSQR Advanced Topics in AI Approved 2022.01 - 20 credit points	
[MODULE] 6530CSQR Contemporary Concepts in Computer Science Approved 2022.01 - 20 credit points	

Level 6 Optional - 20 credit points	OPTIONAL
[MODULE] 6510CSQR User Experience Design Approved 2022.01 - 20 credit points	
[MODULE] 6513CSQR Network Defence Approved 2022.01 - 20 credit points	
[MODULE] 6529CSQR Applied Data Science Approved 2022.01 - 20 credit points	

Teaching, Learning and Assessment

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 is normally by course 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. Key skills are assessed as part of coursework, projects, written examinations and presentations.

Opportunities for work related learning

Opportunities for work related learning
Level 4: 4524CSQR 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: 5530CSQR 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
Other international requirements	Qatar Associate Degree C/2.75 GPA Advanced entry from Bachelors degree – entry after year 1 of Qatari degree 2.75 GPA, and having completed around 30 credit hours Qatar Academic Bridge Programme with minimum pass mark of 55% Students that have studied other qualifications that are equivalent to 120 level 3 UK credits may be offered a place on the programme, if Oryx do an assessment of the subjects studied as part of the programme to be a suitable foundation to ensure success in the programme. 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.

Programme Contacts

Programme Leader

Contact Name

Link Tutor

Contact Name

Syed Naqvi