

APPROVED

Programme Code	BSHC	Programme Duration	4		
Programme Level	8	EQF Level	6	EHEA Level	First Cycle
Programme Credits	240				
Semester Duration	12 Week(s)				
Language of Instruction	English				
Field of Study	0610 - Information and Communication Technologies (ICTs) not further defined or elsewhe				
CAO Code; QQI Progamme Code etc	Code				

Programme Outcomes

On successful completion of this programme the learner will be able to :

Description
Demonstrate fundamental concepts and theories in the specialist areas of computing relating to: • Software Development; • Gaming Programming; • Blockchain; • Artificial Intelligence and Machine Learning; • Data Analytics; • Internet of Things; • Cyber Security; and • Digital Business Transformation.
Analyse, design, implement, test, deploy and document technical solutions that demonstrate use of state of the art processes, methodologies, tools and techniques that efficiently solve a variety of complex problems.
Apply best practice in designing computer solutions in a range of real world contexts.
Critically and effectively analyse problems through both independent and collaborative efforts in order to develop computer solutions as part of a software development team.
Effectively communicate and present the results of their work in the development of a software solution to both technical and non-technical audiences in a professional setting.
Analyse and apply new and emerging technologies and standards in the development of a software solution.
Demonstrate the ability to articulate the wider social and business context within which an IT professional operates and to adopt high ethical and professional standards in work.

Semester Schedules

Stage 1 / Semester 1

Core Subject	
Module Code	Title
H6CMPTHNK	Computational Thinking
H6DISMTHS	Discrete Mathematics

H6PSP	Problem Solving and Programming Concepts
H6CI	The Computing Industry
H6WD	Web Design and Development

Stage 1 / Semester 2

Core Subject	
Module Code	Title
H6CA	Computer Architecture
H6DM	Digital Multimedia
H6IDMD	Introduction to Data Modelling and Databases
H6IIP	Introduction to Programming
H6OPS	Operating Systems

Stage 2 / Semester 1

Core Subject	
Module Code	Title
H6ADA	Advanced Databases
H6DCN	Data Communications and Networking
H6OOP	Object Oriented Programming
H6WAD	Web Application Development
H6WAD	Web Application Development

Stage 2 / Semester 2

Core Subject	
Module Code	Title
H6DSA	Data Structures and Algorithms
H06IBE	Innovation and Business Entrepreneurship
H6SWE	Software Engineering
H6SQT	Software Quality and Testing
H6TP	Team Project

Stage 3 / Semester 1

Core Subject	
Module Code	Title
H7ACN	Advanced Computer Networks
H7SFD	Security Fundamentals and Development
Group Elective 1	
Module Code	Title
H7BAI	Business and Artificial Intelligence
H7IAIML	Introduction to Artificial Intelligence and Machine Learning
Group Elective 2	
Module Code	Title
H7APRG	Advanced Programming
H7PM	Project Management

Stage 3 / Semester 2

Group Elective 3	
Module Code	Title
H7ACI	Academic Internship

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H7WP	Work Placement
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Stage 4 / Semester 1

Group Elective 6	
Module Code	Title
H8BLF	Blockchain Foundations

Group Elective 7	
Module Code	Title
H8BA	Business Analysis

Core Subject	
Module Code	Title
H8CADEV	Cloud Application Development

H8COMPROJ	Computing Project
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H8ITGSE	IT Governance, Security and Ethics
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Group Elective 1	
Module Code	Title
H8SAP	Secure Application Programming

Group Elective 2	
Module Code	Title
H8IOTFDEV	IoT Fundamentals and Development

Group Elective 3	
Module Code	Title
H8IOTFDEV	IoT Fundamentals and Development

Group Elective 4	
Module Code	Title
H8GS	Game Systems

Group Elective 5	
Module Code	Title
H8AI	Artificial Intelligence

Stage 4 / Semester 2

Group Elective 6	
Module Code	Title
H8BCAPD1	Blockchain Application Development 1

H8BCAPD2	Blockchain Application Development 2
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Core Subject	
Module Code	Title
H8COMPROJ	Computing Project

Group Elective 7	
Module Code	Title
H8DT	Digital Transformation

H8SMG	Strategic Management
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Group Elective 1	
Module Code	Title
H8DIGFOR	Digital Forensics

H8PENT	Penetration Testing
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Group Elective 2	
Module Code	Title
H8DMVP	Data Mining and Visualisation Principles

H8IOTAD	IoT Application Development
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Group Elective 3	
Module Code	Title
H8DOS	DevOpsSec

H8SAP	Secure Application Programming
Group Elective 4	
Module Code	Title
H8GP	Games Programming
H8MR	Mixed Reality
Group Elective 5	
Module Code	Title
BHSCDAD	Data Application Development
H8MLE	Machine Learning