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
H06IP	Introduction to Programming
H06OPS	Operating Systems

Stage 2 / Semester 1

Core Subject	
Module Code	**Title**
H6ADA	Advanced Databases
H6DCN	Data Communications and Networking
H06OOP	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

H7ACI	Academic Internship

H7WP	Work Placement

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

H8ITGSE	IT Governance, Security and Ethics

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

Core Subject	
Module Code	**Title**
H8COMPROJ	Computing Project

Group Elective 7	
Module Code	**Title**
H8DT	Digital Transformation

H8SMG	Strategic Management

Group Elective 1	
Module Code	**Title**
H8DIGFOR	Digital Forensics

H8PENT	Penetration Testing

Group Elective 2	
Module Code	**Title**
H8DMVP	Data Mining and Visualisation Principles

H8IOTAD	IoT Application Development

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