



APPROVED

Awards	
Honours Bachelor Degree	
Mode of Delivery:	Full Time
No. of Semesters :	8
NFQ Level:	8
Programme Credits:	5
Language of Instruction:	English
Department:	Computing and Networking

Semester Schedules

Stage 1 / 60 ECTS / Semester 1

Mandatory	
Module Code	Module Title
ZAPP C1202	Communication Skills
ZCOM C1203	Human Computer Interaction
ZDIG C1201	Introduction to 2D Digital Art
ZMAT C1203	Mathematics for Graphics
ZPRG C1203	Introduction to Programming

Stage 1 / 60 ECTS / Semester 2

Mandatory	
Module Code	Module Title
ZANA C1201	Introduction to Data Analytics
ZDSN C1201	Interaction Design
ZGAM C1201	Concept Art for Games
ZGAM C1202	Game Design
ZPRG C1204	Introduction to Object Oriented Programming

Stage 2 / 60 ECTS / Semester 1

Elective Regulation

Learners may apply to EXIT on completion of this stage of the programme with a Higher Certificate in Science in Computer Games Design and Programming (Level 6 Embedded Exit Award) provided they have achieved the required learning outcomes for the level 6 award and have accumulated 120 credits. IT Carlow academic regulations apply

Mandatory	
Module Code	Module Title
PRAC	Object Oriented Programming
COMP	Computer Architecture for Game Devices
GAME	Gameplay Programming I
DEVL	Agile Software Development
PROG	User Interface Programming

Stage 2 / 60 ECTS / Semester 2

Mandatory	
Module Code	Module Title
COAP	2D Game Programming
GRAP	Motion Graphics
PROG	Assembly Programming
GAME	3D Gameplay Programming
ENGR	Software Engineering for Games

Stage 3 / 60 ECTS / Semester 1

Elective Regulation

Learners may apply to EXIT on completion of this stage of the programme with a Bachelor of Science in Computer Games Programming (Level 7 Embedded Exit Award) provided they have achieved the required learning outcomes for the level 7 award and have accumulated 180 credits. IT Carlow academic regulations apply

Mandatory	
Module Code	Module Title
PROG	Gameplay Programming for Mobile Devices
GRAP	3D Graphics
DATA	Data Structures and AI Algorithms
DEVL	Web Development and Databases

Stage 3 / 60 ECTS / Semester 2

Elective	
Module Code	Module Title
PROJ	Project
RECH	Approved Semester Abroad
WKPL	Work Placement

Stage 4 / 60 ECTS / Semester 1

Elective Regulation

Learners that intend to complete Semester 7 only (e.g. Erasmus students) will take the elective Capstone Project module and the remaining 5 credit modules. These students will exit after Semester 1 and will require a transcript of results.

Mandatory	
Module Code	Module Title
GAME	Artificial Intelligence for Games
ENGR	Games Engineering II
NETW	Fundamentals of Game Networking
SYST	Real World Modelling and Simulation
PROJ	Project (Part 1 of 2)
Elective	
Module Code	Module Title
PLAN	Capstone Project

Stage 4 / 60 ECTS / Semester 2

Mandatory	
Module Code	Module Title
MTDS	Online Gaming Technologies
GAME	Game Analytics
PROJ	Project (Part 2 of 2)

Group Elective 1	
Module Code	Module Title
PROG	Concurrent Programming
GAME	Machine Learning for Games
ENTR	Entrepreneurship
COMP	Linux Infrastructure Engineering
SYST	Blockchain Technology
DSGN	UI/UX Design and Development
TECH	Artificial Intelligence in the Wild
LANG	Programming Language Design
FALT	Bias in Computational Systems
DATA	Data Engineering
DEVL	Distributed Development
COAP	Cloud Data Centers
VISU	Data Visualisation
SCIE	Case Studies in Data Science