

BACHELOR OF SCIENCE (HONS) IN COMPUTING

With specialisations in Software Development, Cybersecurity, Games Programming, Artificial Intelligence and Machine Learning, Digital Business Transformation.

FACTFILE

Part-time Schedule

Start Date
Sept 2026

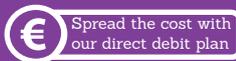
Duration
4 years; 3 semesters per year. Use of blended learning

Delivery
Blended - Livestream with some on-campus stream classes, scheduled in advance

**Please note that in September 2026, classes may be online only. Students will be informed in advance*

Indicative Timetable
Two evenings per week, 18.00 - 22.00 and Saturdays 09.00 - 18.00

Fees
€4,350 per annum
(Fees revised annually)



Spread the cost with our direct debit plan

Application: Apply online at www.ncirl.ie

Course Description

This innovative BSc (Hons) in Computing with specialisations is intended to appeal to anyone who is interested in developing practical knowledge and skills in the application of technology to help solve problems in business, data analytics, artificial intelligence, machine learning, blockchain, gaming and cybersecurity. In your final year, you will study modules based on your chosen specialisation from important and exciting areas of computer science.

This computing course will equip you to create software applications for business transformation, artificial intelligence, data analytics, gaming, blockchain and internet of things. You will also understand how to incorporate user data into software applications and how to engineer a software application from requirements through analysis, design, implementation and testing. The course will also allow you to develop your business and interpersonal skills.

Who is the course for?

This part-time course is aimed at those working in the information and communications technology industry and wishing to develop their knowledge and skills in the area of computing and to improve their career prospects. It will also appeal to anyone wishing to move into the information and communications technology industry.

Entry Requirements

This IT degree course is designed to appeal to those at work or seeking to re-enter the workforce. There are no specific academic requirements as applicants are considered based on relevant work and other experience. Applicants may be required to attend an interview as part of the application process. Applicants under 21 will be assessed based on Leaving Certificate or equivalent.

Laptop Requirement

This programme has a BYOD (Bring Your Own Device) policy. Specifically, students are expected to successfully participate in lectures, laboratories and projects using a laptop computer with a substantial hardware configuration.

The recommended configuration is as follows:

Processor:

Intel 11th Gen or newer, Core i3 / i5 / i7 or Ultra 3 / 5 / 7
Or
AMD 5000 Series or newer, Ryzen 3 / 5 / 7
Random Access Memory (RAM): 16GB or greater

Storage:

SSD (Solid State Drive) 256GB or greater

Wireless Card:

802.11 n/ac/ax capability

Recommended Operating Systems:

Windows 11
Later Version of MAC OS should also be fine.
Chromebook's are not recommended.

It is the responsibility of the student to ensure their computer is functioning correctly and that they have full administrator rights. NCI cannot provide support for these personal devices.

Award and Progression

The Bachelor of Science (Honours) in Computing is awarded by QQI at level 8 on the National Framework of Qualifications. This award will allow progression to level 9 courses on the NFQ. The final award is calculated from the weighted results of stages 2, 3 and 4. The course also prepares students for industry-recognised certificates in leading technologies.



COURSE CONTENT

Year 1

Semester 1

- Discrete Mathematics
- Operating Systems
- Computational Thinking
- Programming Concepts

Semester 2

- Computer Architecture
- Introduction to Programming
- Introduction to Data Modelling and Databases

Semester 3

- Web Design and Development
- The Computing Industry
- Introduction to Data Science & AI

Year 2

Semester 1

- Web Application Development
- Object Oriented Programming
- Data Communications & Networking

Semester 2

- Data Structures and Algorithms
- Advanced Databases
- Data Programming

Semester 3

- Software Engineering
- Software Quality & Testing
- Innovation and Business Entrepreneurship
- Team Project

Year 3

Semester 1

- Advanced Computer Networks
- Workplace Readiness
- Technical Electives*:
 - Artificial Intelligence
 - Advanced Programming
- Business Computing Electives*:
 - Business & Artificial Intelligence
 - Project Management
- Networking and Cloud Infrastructure
 - Artificial Intelligence
 - System Administration & Virtualisation

*Students should choose either the Technical Electives or the Business Computing Electives. Students who complete the Business Computing Electives will go on to the 4th Year specialisation in Digital Business Transformation. Students who complete the Technical Electives may choose to specialise in either Games Programming, Software Development, Cybersecurity, Networking & Cloud Infrastructure, and Artificial Intelligence & Machine Learning

Semester 2

- Security Fundamentals and Development

Semester 2 & Semester 3

Work Placement | Service Learning | Academic Internship

Year 4 - Choose a Specialisation

Year 4

Games Programming

Semester 1

- Project
- Cloud Application Development
- Games Systems

Semester 2

- Project
- Mixed Reality
- Games Programming
- Governance, Ethics, Security & Sustainability
- Metaverse

Semester 3

- Project

Year 4

Software Development Specialisation

Semester 1

- Project
- Cloud Application Development
- Secure Application Programming

Semester 2

- Project
- IoT Fundamentals & Development
- Governance, Ethics, Security & Sustainability
- DevOpsSec
- Blockchain

Semester 3

- Project

Year 4

Cybersecurity Specialisation

Semester 1

- Project
- Cloud Application Development
- Secure Application Programming

Semester 2

- Project
- DevOpsSec
- Penetration Testing
- Governance, Ethics, Security & Sustainability
- Digital Forensics

Semester 3

- Project

Year 4

Artificial Intelligence and Machine Learning

Semester 1

- Project
- Cloud Application Development
- Statistics & Machine Learning

Semester 2

- Project
- Data Application Development
- Governance, Ethics, Security & Sustainability
- Applied Deep Learning
- AI & Sustainability

Semester 3

- Project

Year 4

Digital Business Transformation

Semester 1

- Project
- Cloud Application Development
- Business Analysis

Semester 2

- Project
- Business Process Automation
- Digital Transformation
- Governance, Ethics, Security & Sustainability
- Strategic Management

Semester 3

- Project

Year 4

Networking and Cloud Infrastructure

Semester 1

- Project
- Cloud Application Development
- Cloud Scale Infrastructure

Semester 2

- Project
- DevOpsSec
- Governance, Ethics, Security & Sustainability
- Software Defined Networks
- Cloud Security

Semester 3

- Project

Availability of specialisations is subject to student numbers

Assessment

The course will be assessed with a blend of continuous assessments and/or project work and exams. Please note that in some instances exams may take place in the daytime, evenings and at weekends.