

Higher Diploma in Science in Computing

(With specialisation in Artificial Intelligence / Machine Learning)

(Online Directed E-Learning delivery)

This is an online learning course that features Directed E-Learning activities such as live online classroom sessions and tutorials/videos on the College's e-learning system. This allows for online class time to be interactive, practical, and focused, with theory-based content being covered outside of class time with self-paced tutorials/videos, and practical content being covered in live online classes with support from lecturers.

Online Directed E-Learning Delivery (1 Year)

Location: Online

Duration: September to December 2026, January to May 2027 and May to August 2027.

Start Date: This course is expected to start in the week commencing 21st September 2026.

Applications: Apply online at <https://springboardcourses.ie>

Indicative Schedule: Tuesday and Thursday 18.00 - 22.00.

Fees: A student contribution fee of €595 is applicable if you are in employment. No fees applicable if you are unemployed. The scheme does not cover any allowance for books and materials.

There will also be on average five hours self-paced learning per week on NCI's Learning Platform weekly. This will not appear on your timetable.

If a student contribution fee is applicable this must be paid in full no later than Friday 13th of November 2026.

Career Bridge classes will be delivered one day per week in Semester one from 17.00 to 18.00. Day to be confirmed.

Course Description

The course teaches students the computing fundamentals, complemented with detailed knowledge, problem-solving and specialised technical skills required for analysing, designing and developing technical software solutions. The second semester consists of a focused set of modules that are specific to the Artificial Intelligence and Machine Learning specialisation. The course aims to impart awareness and appreciation of relevant topics in the area of specialisation.

The Artificial Intelligence and Machine Learning stream provides learners an understanding and application development of AI-powered products by leveraging expertise in machine learning and computational methods.

Career Prospects

The Higher Diploma in Science in Computing with specialisation in Artificial Intelligence//Machine Learning is tailored to address the demands of the IT industry and enhance graduates' employment prospects. Examples of past graduate employers include ICT Graduate Programme (Kerry Group), Software Developer (Merkle), Business Information Specialist, Analytics (AIB), Technical Support (Survey Monkey), Senior Technical Support Engineer - Service Cloud (Salesforce), System Engineer (Jaguar Land Rover).

Who is the course for?

This course will appeal to graduates with a level 8 degree from different backgrounds who would wish to change their non-ICT qualification into the computer science field through a level 8 award in computing. Nonetheless, it is noted that the course is technical in nature and will entail a significant amount of independent study. Given the content and the timescale you will need to have a strong commitment to the course and a willingness to fully engage with the technical content.

Academic Entry Requirements

A level 8 degree or its equivalent in a non-cognate discipline. Non-standard applications will be also considered on an individual basis. The college operates a Recognition of Prior Experiential Learning (RPEL) scheme meaning applicants

who do not meet the normal academic requirements may be considered based on extensive relevant work and other experience. This may be assessed through a portfolio of learning, demonstration of work produced, interview and assessment.

Non-English speaking applicants must demonstrate fluency in the English language as demonstrated by an IELTS academic score of at least 6.0 or equivalent. Visit <https://www.ncirl.ie/English-Language-Requirements-International> for more information.

Laptop Requirements

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

A suitable minimum specification is 16GB RAM (32GB recommended), a modern Intel i7 /AMD Ryzen 7/ Apple Silicon equivalent processor, at least 256GB SSD storage (512GB recommended), reliable Wi-Fi, and a recent version of Ubuntu, macOS, or Windows. Students must have full administrator rights on their device in order to install and configure required software and development tools. Access to a webcam, microphone, and power supply for extended lab sessions is also expected.

For online examinations, students will require access to both a webcam and a smartphone for online proctoring.

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.

Award and Progression

For all streams regardless of specialisation, your award will be a Higher Diploma in Science in Computing awarded by QQI at level 8 on the National Framework of Qualifications (NFQ). Students who successfully complete this course may be eligible to progress to a major award at level 9 on the NFQ.

As graduates from other disciplines and with work experience, learners will have life skills and experiences that they will bring with them on the programme and into a new subject domain. Therefore, they are eligible for a number of roles. They could work in positions that are in-line with their skills but in the ICT sector, or apply ICT knowledge gained through this programme to their current role.



Course Content

(Online Directed E-Learning delivery)

Semester 1

- Software Development
- Object Oriented Software Engineering
- Introduction to Databases
- Web Design and Client Side Scripting
- Career Bridge*

Semester 2

- Computer Architecture Operating Systems and Networks
- Artificial Intelligence
- Machine Learning Fundamentals
- Statistics

Semester 3

- Project

*Career Bridge is a compulsory (non-accredited) module of the Springboard+ programme. Students are required to participate unless formally exempt. For full details, please see page 16).

Your Careers Advisor will support you during the course and for up to three months after completion, helping you to prepare for and apply to relevant employment opportunities.