Higher Diploma in Science in Computing
(With specialisation in Artificial Intelligence / Machine Learning)

This course comes in two delivery options.You can decide to do the blended option delivered in the IFSC or the other option is an online version. All classes in Semester 1 due to Covid 19 Restrictions will be delivered online. *Subject to QQI Validation.

Career Bridge will be delivered one day per week in Semester 2 from 17.00 to 18.00. Day to be confirmed.

Blended and Online Delivery Options
(1 Year)

Location: Online and IFSC Campus

Start Date: The course is expected to start in the week commencing 28th September 2020.

Indicative Schedule: Blended Delivery will be scheduled Monday, Wednesday & Friday 18.00 – 22.00 and a number of Saturdays 09.00 - 18.00

Career Bridge classes will be delivered one day per week 17:00 start – day to be confirmed.

Duration: 1 year, 3 semesters. September to December 2020, January to May 2021 and one final semester from late May to August 2021.

Applications: Apply online at www.springboardcourses.ie

Fees: A student contribution fee of €540 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.

If a student contribution fee is applicable this must be paid in full no later than Friday 20th November 2020.

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
This course is designed to meet the needs of the IT sector and secure future employment for graduates. Companies who have hired 2018/2019 graduates include: SOLAS (Software Developer), Jaguar Land Rover (Senior Cloud DevOps Engineer), Version 1 (Java Developer), Ergo (Technical Account Manager), Dell (Graduate Programme, Enterprise Support), Civil Service (Software Developer), Fenergo (Java Developer), Openet (Graduate Software Engineer), Ding (Junior QA Engineer), Global Payments (Operations Analyst), Oracle (Senior Cloud Customer Operations Engineer).

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. It will also appeal to technical and non-technical professionals who would like to upgrade their skills in one of the specialisations provided by this course, helping them to progress faster in their employment or to apply the knowledge in their current role.

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 using a portfolio of learning, demonstration of work produced, and interview.

Laptop Requirements
Students are expected to successfully participate in lectures, laboratories and projects using a laptop computer with a substantial hardware configuration. A suitable configuration is 6GB of RAM (8GB or more are recommended); a 64-bit x86 processor (Intel i5 or superior); 250+ GB of hard disk; wifi card; and a recent installed release of Windows operating system. It is the responsibility of the student to ensure their laptop is functioning correctly and that they have full administrator rights to the machine. NCI IT cannot provide support to personal devices.

The online version of this course requires internet access you will be required to ensure you have sufficient broadband speed and reliable connectivity from your place of study.

Assessment
The course will be assessed with a blend of continuous assessments and/or project work and exams. This varies between modules but typically assessment is split 50:50 or 60:40 between continuous assessment and/or project and exam. Please note that in some instances exams may take place in the daytime and at weekends

Award and Progression
The Higher Diploma in Science in Computing is 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.

Artificial Intelligence and Machine Learning specialisation

Semester 1
- Software Development
- Object Oriented Software Engineering
- Introduction to Databases
- Web Design and Client Side Scripting

Semester 2
- Computer Architecture Operating Systems and Networks
- Artificial Intelligence
- Statistics
- Career Bridge

Semester 3
- Machine Learning Fundamentals - Block delivery
- Project - Block delivery

Relevant Employment / Placement can be undertaken within the course timeline, or commenced within 3 months of course completion.

Note: The prospective students are required to specify the specialisation they would like to follow when they apply for a place within the Higher Diploma in Science in Computing programme.

Elective streams/specialisations will run subject to student numbers.