Higher Diploma in Science in Data Analytics with Artificial Intelligence

(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

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

Indicative Schedule: Tuesday and Thursday 18.00 - 22.00.

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

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

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

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

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.

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

Course Description

The primary aim of the Higher Diploma in Science in Data Analytics and Artificial Intelligence (DAAI) programme is to equip learners with the theoretical knowledge and practical skills needed to work effectively with modern data analytics and artificial intelligence technologies. The programmes cover key areas such as data storage, data integration, data governance, large scale data processing, statistical analysis, business intelligence and visualisation, machine learning, AI technologies and cloud platforms.

The programme aims to equip graduates with the skills and competencies needed to apply data analytics techniques across a range of domains, enabling effective data-driven decision-making and problem-solving, enhanced by the use of AI tools and technologies.

It is an intensive conversion programme, co-designed with industry partners to ensure strong alignment with current and emerging market needs. The programme is designed to support career changers entering the field of Data Analytics with AI, as well as professionals seeking to upskill or reskill. It prepares graduates for roles such as data analyst, data scientist, business analyst, data engineer and data AI/ML related roles.

On successful completion of this programme graduates will be able to:

- Perform data analysis using programming and analytical tools applying a wide range of statistical techniques.
- Visualise, interpret, and communicate insights effectively to both technical and non-technical audiences.
- Extract meaningful insights from diverse datasets using appropriate data management, storage, analytical and modelling techniques.
- Adopt appropriate professional, ethical, legal, security, privacy and sustainability principles in designing and implementing data-driven business solutions.
- Use cloud and data platforms, big data technologies and processing paradigms to design and implement scalable data-driven solutions.
- Apply Artificial Intelligence techniques, including Machine Learning, Deep Learning and Natural Language Processing, to analyse complex data and generate deeper insights.

The course will be delivered through a highly practical, industry-focused, case study driven approach. Learners will engage with complex, multi-domain challenges across a range of sectors, including commercial, healthcare, finance, government, and technology environments. This approach will naturally foster a deeper understanding of the subject area and create transferable workplace skills such as critical thinking, problem-solving, communication, teamwork and research.

The programme is delivered entirely by experienced faculty and industry practitioners with proven expertise in data analytics, ensuring that learning is aligned with current industry practices and real-world applications.

Career Prospects

Graduates from the previous 2 - 3 years leveraged the course to enhance their skills or secure positions such as Statistics Analyst (Central Bank of Ireland), Business Analyst (Commission for Communications Regulation), Data Scientist (Pfizer), Quality Analyst (Tik Tok), Digital Client Support (Citi), Senior Technologist (Enterprise Ireland), Data Analyst (VHI)

Examples of past graduate employers includeData Quality Analyst (Tik Tok), Credit Portfolio Manager (Google), Data Operations Analyst (TD Securities), QA Analyst (SEB Life International), Fund and Data Platform Analyst (Legal and General Investment Management), Technical Lead (IMGS), Data Analyst (Glovo).

Who is the course for?

This course will appeal to professionals and college graduates from non-technical disciplines who wish to upgrade their skills or simply advance their career in the domain of Data Analytics powered with Artificial Intelligence models and tools.

Award and Progression

The Higher Diploma in Science in Data Analytics with Artificial Intelligence is awarded by QQI at level 8 on the National Framework of Qualifications.

Students who successfully complete this course may progress to a major award at level 9 such as the Masters of Science in Data Analytics or Artificial Intelligence.

Academic Entry Requirements

Applicants are required to hold a level 8 honours degree or equivalent in any discipline. Candidates with level 7 degree in a cognate area (STEM) are also considered for direct access into the programme. 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 (e.g. logic test).

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, project work and exams. Typically, each module is evaluated using two components, weighted to a total of 100%. For example, this may consist of 50% continuous assessment and 50% final exam.

Please note that in some instances exams may take place in the daytime, evenings and at weekends.

Course Content

(Online Directed E-Learning Delivery)
(1 Year)

Semester 1

- Statistics and Probability
- Programming For Data Analytics
- Databases for Analytics
- Business Intelligence and Visualisation
- Career Bridge*

Semester 2

- Data Mining and Machine Learning
- Governance, Ethics, Security & Sustainability
- Deep Learning and Generative AI

Semester 3

- Cloud and Scalable Analytics
- 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.