Postgraduate Diploma in Science in Data Analytics

(Online Directed E-Learning) (1 Year)

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 and lab assistants.

Location: Online

Start Date: The course is expected to start in the week commencing 20th of January.

Indicative Schedule: Tuesday and Thursday 18.00 - 22.00.

There will also be 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 2 from 17.00 to 18.00. Day to be confirmed.

Duration: January to May 2025, May to August 2025 and September to December 2025.

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

Fees: A student contribution fee of €650 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 14th March 2025.

Course Description

The overall goal of the Postgraduate Diploma in Data Analytics programme is to provide graduates with essential research and development skills in Data Analytics. It is envisaged that graduates from this programme will be well equipped to perform independent research that enables them to make informed and critical decisions regarding requirements elicitation and analysis, implementation, evaluation, and documentation in Data Analytics. Furthermore, the programme seeks to produce graduates who are able to provide insight, gain value and discover knowledge (at an organisational, societal, or personal level) from data through exercising the skills that are developed through the programmes.

Upon completion of this course, graduates will be able to:

- Conduct substantial and extensive independent research and analysis in the field of Data Analytics.
- Formulate and implement a novel research idea using the latest industry practices.
- Demonstrate expert knowledge and a critical understanding of data analysis, statistics, and the tools, techniques and technologies of Data Analytics utilised in both technical and business contexts.
- Critically assess, evaluate and communicate business & technical strategies for Data Analytics.
- Formulate, design, assess, and implement effective business & technical solutions for Data Analytics.
- Critically assess and evaluate security, privacy, sustainability, and ethical issues associated with the storage, transfer, and processing of data for analytical purposes.

The course structure accommodates a wide audience of learners whose specific interests in data analytics may be either technically focused or business focused.

Career Prospects

This course is designed to meet the ever-growing need for deep skills in Big Data/Analytics to fill a skills shortage in Ireland. Graduates will be equipped to apply analytics in industries such as finance (fraud detection), healthcare (predictive diagnostics), and marketing (customer segmentation).

Alumni of the Data Analytics program have gone on to work as Data Scientists at top companies like DTSQUARED (Data Management Consultant) Valeo (Data Management Lead), ESB (Data Analyst) SectoGMC (QA Manager), TedCastles Oil Products (Senior Business Analyst), Fidelity Investments (Senior Systems Analyst), MetLife Production (Management Analyst) Pernod Ricard (Marketing Analytics), DXC Technology (Data Analyst) , Deloitte (Artificial Intelligence Consultant)

Who is the course for?

This course is for graduates who have substantial technical,especially programming, and mathematical/ statistical skills. Graduates from non-STEM disciplines (Science, Technology, Engineering, and Mathematics) that have not developed these skills will need to be able to demonstrate an aptitude for technical (programming) and mathematical problem solving.

Academic Entry Requirements

Applicants are normally required to hold a minimum of a level 8 honours qualification (2.2 or higher) or equivalent on the NFQ in a cognate discipline. Candidates will be required to demonstrate technical or mathematical problem solving in previous learning. Graduates from programmes without embedded technical or mathematical problem solving will need to demonstrate these skills in addition to level 8 qualifications (via certifications, qualifications, certified experience and assessment tests). All applicants must evidence prior programming experience (e.g., via academic transcripts or recognised certification). Standard applicants are holders of technical, numerate degrees who are likely to gain a higher ranking in order of merit for admission to this programme. Normally, these would be applicants who have gained a minimum of a Level 8 qualification in a numerate discipline, typically Computing or Informatics. Such applicants with a level 8 qualification (2.2 or higher) or equivalent are eligible for direct entry. Following computing graduates, we next assign priority to candidates with a background in engineering, mathematics, physics and chemistry. Consideration of these applications is by detailed examination of the content, assessments and syllabi of applicants' primary degrees. Such candidates may also be assessed by interview.

Additionally, applications will be considered for those with a minimum of a Level 8 qualification in a programme with a significant IT and/ or numerate component which could include Management Information Systems, Accounting, Economics, Marketing Management, Sociology and Biology. Programmes in this category may vary greatly in mathematical and information technology content and applications would be assessed by detailed examination of programme content, assessments and syllabi. Candidates with qualifications in this category will be assessed by interview.

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. English Language Requirements | National College of Ireland (ncirl.ie).

Laptop Requirements

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. A suitable configuration is 8GB of RAM (16GB are recommended); a modern 64-bit x86 processor (Intel i5 or superior); 250+ GB of available space in hard disk; WiFi card; and a recent version of Ubuntu, macOS or Windows. 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 does not provide support for personal devices.

This course requires internet access. You will be required to ensure you have sufficient broadband speed and reliable connectivity from your place of study.

Free Laptop loan for eligible students on this course:
Students who are eligible for HEA funding for this course may also be eligible for a free laptop provided on a loan basis for the duration of the programme. This will be a suitable specification machine for completion of the programme but must be returned once you have finished your course. Overall numbers of laptops available are subject to maximum numbers and no other alternatives can be offered.

Check *https://www.ncirl.ie/Laptop-Loan-Scheme* for updates on the next opening date for applications.

Assessment

The course will be assessed with a blend of project work and exams. This varies between modules but typically assessment is 50% continuous assessment and 50% exam

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

Award and Progression

Graduates of the Postgraduate Diploma in Science in Data Analytics are awarded an NFQ Level 9 qualification. You can optionally complete the additional 30 credits required to upgrade their qualification to the MSc in Data Analytics (Not included under Springboard+ - additional fee would apply).

Course Content

(Online Delivery)
(1 Year)

Semester 1
- Statistics and Optimisation
- Analytics Programming and Data Visualisation
- Data Governance, Ethics and Sustainability

Semester 2
- Data mining and Machine Learning
- Business Intelligence and Business Analytics
- Career Bridge

Semester 3
- Deep Learning and Generative AI
- Modelling and Simulation - Elective Module
- Data Intensive Scalable Systems - Elective Module
- Domain Applications - Elective Module

Note: Electives are designed to allow students to gain specialised knowledge in Data Analytics related areas. Students will choose two out of the three elective modules. The selection will be subject to the minimum number of students required to run a module.

Springboard Careers Advisors will proactively support you in finding relevant employment during the course or within 3 months following completion of the course.

Note that all modules count towards the final award classification.