MASTER OF SCIENCE IN
DATA ANALYTICS

FACTFILE

Application: Apply online at www.ncirl.ie

€ Spread the cost with our direct debit plan
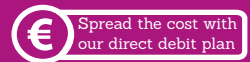
Part-time Schedule

Duration	Delivery	Start Date	Indicative Timetable	Fees
2 years; 4 semesters with a research practicum or internship	Blended - Livestream with some on-campus stream classes, scheduled in advance. See page 4 for more information.	Sept 2025	Two evenings per week, 18.00 - 22.00 and every second Saturday.	€4,800 per annum €9,600 total fee (Fees revised annually)

Full-time Schedule

Duration	Delivery	Start Date	Indicative Timetable	EU Fee
1 year; 3 semesters with a practicum or internship	Campus – Classes will take place face-to-face on campus.	Sept 2025 and Jan 2026	Students need to be available 09.00-18.00 Mon – Fri. Class days and times vary.	€7,000 total fee (EU/Ireland applicants) (Fees revised annually)

Course Description

The overall goal of the MSc 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 and technical strategies for Data Analytics.
- Formulate, design, assess, and implement effective business and 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.

The course will be delivered using academic research, industry-defined practical problems, and case studies. This approach will naturally foster a deeper knowledge of the subject area and create transferable skills for work such as critical thinking, problem-solving, creative thinking, communication, teamwork, and research skills. The course is completely delivered by faculty and industry practitioners with proven expertise in data analytics.

Who is the course for?

This course is ideal for graduates that are looking to progress into the emerging data analytics market to increase their employment potential. The course is suitable for graduates who have technical or mathematical problem-solving skills.

Graduates from disciplines that have not developed these skills will need to be able to demonstrate an aptitude for technical or mathematical problem solving.

Award and Progression

The Master of Science in Data Analytics is awarded by QQI at level 9 on the National Framework of Qualifications. Students who successfully complete this course may progress to a major award at level 10 on the NFQ. Students may also elect to exit early with the Postgraduate Diploma in Science in Data Analytics at level 9 on the NFQ.

Entry Requirements

A minimum of a level 8 honours qualification (2.2 or higher) or equivalent on the National Qualifications Framework in a cognate discipline. Given the target technical market for graduates of this programme, candidates will be required to demonstrate technical or mathematical problem-solving skills as part of previous programme learning. Standard applicants for the programme are those holders of technical, numerate degrees. Graduate from disciplines which do not have technical or mathematical problem-solving skills embedded in their programme will need to be able to demonstrate technical or mathematical problem-solving skills in addition to their level 8 programme qualifications (Certifications, Additional Qualifications, Certified Experience and Assessment Tests). All applicants for the programme must provide evidence that they have prior programming experience (e.g., via academic transcripts or recognised certification).

For candidates who do not have a level 8 qualification the College operates a Recognition of Prior Experiential Learning (RPEL) scheme meaning applicants who do not meet the normal academic entry requirements, may be considered based on relevant work or other experience. 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.

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 portable computer (laptop/notebook) with a substantial hardware configuration. The minimal suitable configuration is 8GB of RAM (16GB are recommended); a modern 64-bit x86 multicore 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 each student to ensure their computer is functioning correctly and that they have full administrator rights. NCI IT cannot provide support for these personal devices.

Some students may be able to avail of the Student Laptop Loan Scheme, subject to eligibility. See page 87 for more information.

COURSE CONTENT YEAR 1 - 2

Core Modules
- Statistics & Optimisation
- Data Mining & Machine Learning
- Analytics Programming & Data Visualization
- Data Governance, Ethics, and Sustainability
- Deep Learning & Generative AI

Research Elective
Research Practicum
or
Internship

In addition, there is a choice of two further electives from a set of three elective modules.

Elective Choices
- Data Intensive Scalable Systems
- Modelling & Simulation
- Domain Applications

For the MSc in Data Analytics running in full-time delivery over three semesters, learners choose one of the 6 ECTS elective modules in semester 2, and one of the remaining two ECTS elective modules in semester 3. For the MSc in Data Analytics running in part-time delivery over four semesters, learners choose two of the three ECTS elective modules in semester 3. Electives will be chosen in advance of the semester starting.

Elective modules are subject to availability and a minimum number of students required to run a module.

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.