

MASTER OF SCIENCE IN DATA ANALYTICS

FACTFILE

Delivery

Blended/Fully Online (Fully online delivery is subject to QQI validation). See page 4 for more information.

Application

Apply online at www.ncirl.ie

Part-time Schedule

Indicative Schedule

Two evenings per week, 18.00 - 22.00 and every second Saturday.

Duration

2 years; 4 semesters with a final research project

Start Date

Sept 2021

Fees

€4,475 per annum
€8,950 total fee
(Fees revised annually)

Full-time Schedule

Indicative Schedule

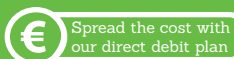
Students need to be available 09.00-18.00 Mon – Fri.
(Class days and times vary)

Duration

1 year; 2 semesters with a final research project

EU Fee

€6,500 total fee
(EU/Ireland applicants)
(Fees revised annually)



Course Description

This computing course aims to produce high-quality, technically competent, innovative graduates that will become leading practitioners in the field of data analytics.

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

- Conduct 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 of data analysis, statistics, and the tools, techniques and technologies of data analytics utilised in both technical and business contexts.
- Critically assess and evaluate business and technical strategies for data analytics.
- Develop and implement effective business and technical solutions for data analytics.
- Critically appreciate ethical and data governance issues relevant to data analytics.

The course structure accommodates a wide audience of learners whose specific interests in data analytics may be either technically focused or business focused. All students will also gain exposure to pertinent legal issues and product commercialisation considerations associated with the data analytics field. 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 degree) qualification (2.2 or higher) on the National Framework of Qualifications. Applicants may be from a cognate/STEM background. Standard applicants for the programme are those hold computing or numerate degrees. 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 6.5 or equivalent.

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 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 multi-core 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 71 for more information.



COURSE CONTENT YEAR 1 - 2

Core Modules

- Statistics for Data Analytics
- Database and Analytics Programming
- Data Mining and Machine Learning I
- Data Mining and Machine Learning II
- Modelling, Simulation and Optimization
- Research in Computing
- Data Governance in Ethics
- Research Project

In addition, there is a choice of two electives (one in Year 1 Semester 2 and one in Year 2 Semester 1)

Elective Choices

Year 1 Elective Choices

- *Business Intelligence and Business Analytics*
- *Data Intensive Architectures*

Year 2 Elective Choices

- *Domain Applications for Predictive Analytics*
- *Scalable Systems Programming*

There are dependencies between elective modules. The first elective module choice will dictate the choice of the second elective module. For the current suite of electives dependencies are:

- *Business Intelligence and Business Analytics* -> *Domain Applications for Predictive Analytics*
- *Data Intensive Architectures* -> *Scalable Systems Programming*.

Elective modules are subject to availability.

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.