NATIONAL COLLEGE OF IRELAND

MASTER OF SCIENCE IN DATA ANALYTICS

FACTFILE

Application
Apply online at www.ncirl.ie

Start Date
Sept 2023

Spread the cost with our direct debit plan

Part-time Schedule

Duration
2 years; 4 semesters with a final research project

Delivery
Blended - Livestream with some on-campus stream classes, scheduled in advance. See page 4 for more information

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

Fees
€4,700 per annum
€9,400 total fee
(Fees revised annually)

Full-time Schedule

Duration
1 year; 3 semesters with a final research project

Delivery
Campus – Classes will take place face-to-face on campus. See page 4 for more information.

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

EU Fee
€6,800 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.

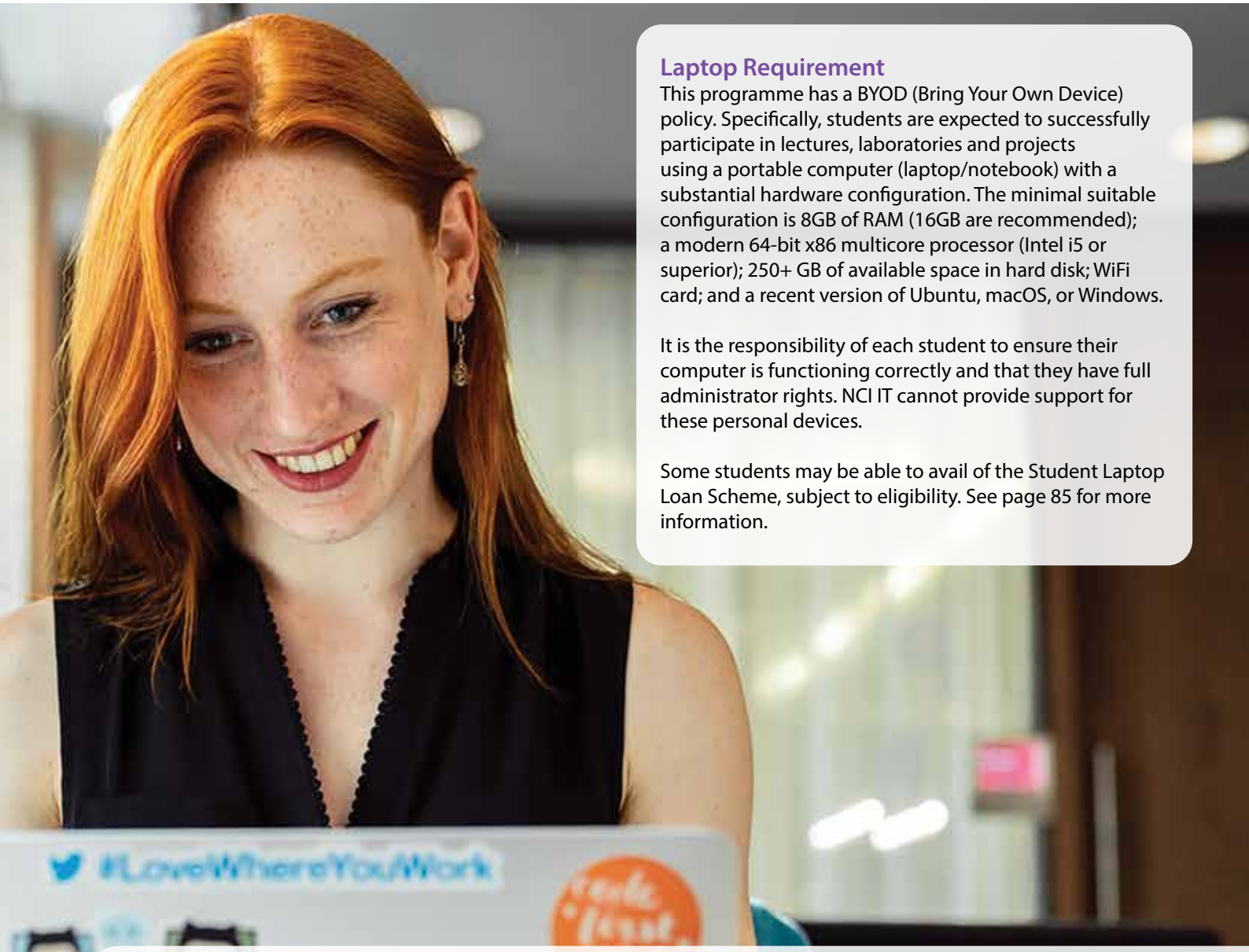
Graduates from disciplines that have not developed these skills will need to be able to demonstrate an aptitude for technical or mathematical problem solving.

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 who 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 6.0 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 85 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

Elective Choices

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

There are dependencies between electives 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 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.