

# MASTER OF SCIENCE IN CLOUD COMPUTING

## FACTFILE

### Delivery

Blended - Livestream with some Campus Stream classes, scheduled in advance. See page 4 for more information.

### Application

Apply online at [www.ncirl.ie](http://www.ncirl.ie)

### Part-time Schedule

#### Indicative Schedule

Two evenings per week  
18.00 - 22.00  
and some Saturdays

#### Duration

2 years; 4 semesters with a final research project.

#### Start Date

Sept 2022

#### Fees

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

### Full-time Schedule

#### Indicative Schedule

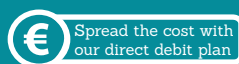
Students need to be available  
09.00-18.00 Mon – Fri.  
(Class days and times vary)

#### Duration

1 year; 2 semesters with a final research project

#### EU Fee

€6,800 total fee  
(EU/Ireland applicants)  
(Fees revised annually)



## Course Description

This programme aims to fulfil the ICT sector-specific needs as reported in Ireland's National Skills Strategy 2025. By combining technical skills with innovation principles, it effectively delivers core technology skills in cloud software development, fog/edge computing, DevOps, security, and data governance. Having also considered global industry trends, it includes electives in innovation, quantum computing, blockchain, and machine learning.

Students will gain experience with the latest ethical design principles, models, and technologies via our state-of-the-art Cloud Competency Centre. The course is delivered by faculty and industry practitioners with proven expertise in cloud computing.

### Who is the course for?

This programme will appeal to computer science graduates, ICT industry practitioners, system administrators, and those with an interest in gaining practical experience in cloud computing.

As a graduate of this programme, you will be able to:

- Conduct independent research and analysis in the field of Cloud Computing.
- Formulate and implement a novel research idea using the latest industry practices.
- Demonstrate expert knowledge of application development, systems programming, parallel and distributed computing, and the tools, techniques and technologies of cloud computing utilised in both technical and business contexts.
- Critically assess, evaluate, and communicate business and technical strategies for cloud computing.
- Develop and implement effective business and technical solutions for cloud computing.
- Critically assess and evaluate security, privacy, and ethical issues associated with the storage, transfer, and processing of data on private and public cloud infrastructures.

## Award and Progression

The Master of Science in Cloud Computing 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 Cloud Computing at level 9 on the NFQ.

## Entry Requirements

An honours (level 8) primary degree in a computing discipline with a 2.2 award or higher. Students in their final year of undergraduate study can be admitted on the condition that their degrees are awarded before they enrol at NCI. The college operates a Recognition of Prior Experiential Learning (RPEL) scheme, i.e., applicants who do not meet the normal academic requirements may be considered based on relevant work and other experience. This may be assessed using a portfolio of learning, demonstration of work produced, and an interview. Non-English-speaking applicants must demonstrate fluency in English evidenced 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 16GB of RAM (32GB are recommended); a modern 64-bit multi-core processor (Intel i7, Apple M1, 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.

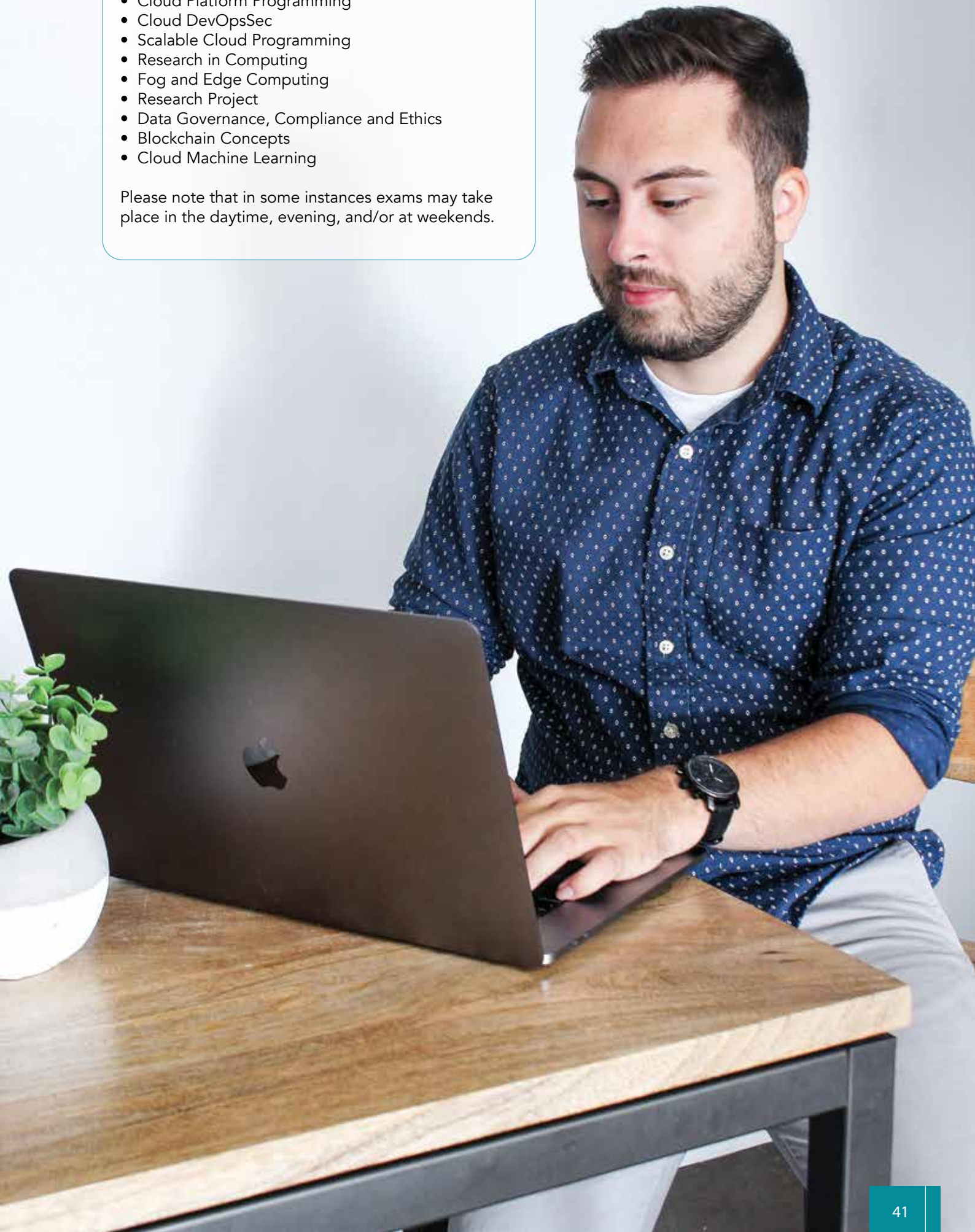
Some students may be able to avail of the Student Laptop Loan Scheme, subject to eligibility. See page 77 for more information.

## COURSE CONTENT YEAR 1 - 2

### Core Modules

- Cloud Architectures
- Cloud Platform Programming
- Cloud DevOpsSec
- Scalable Cloud Programming
- Research in Computing
- Fog and Edge Computing
- Research Project
- Data Governance, Compliance and Ethics
- Blockchain Concepts
- Cloud Machine Learning

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



# COURSE DELIVERY

## for 2022/23

The majority of NCI's part-time programmes featured in this prospectus will be delivered in a blended format for 2022/23.

In most programmes this will mean the majority of the programme content will be delivered online but with some on-campus sessions. This will vary with the programme, but the breakdown of your course will be communicated to you in advance, and you will be able to plan for any required campus elements.

Across courses the following delivery methods may be employed:

**Campus** – The learning event (lecture, tutorial, laboratory, or seminar) takes place face to face on campus.

**Livestream** – The learning event takes place online.

**Campus-stream** – The learning event takes place face to face on campus and is simultaneously streamed online.

**Directed e-learning** – There are specified tasks to be carried out by students during a designated time interval (such as viewing a video, taking a quiz)

How these elements are broken down for each course will be available on the course pages on [ncirl.ie](http://ncirl.ie).

In some instances, recorded lectures may also be available.

### **Bring Your Own Device**

Given the amount of online content in these programmes it is a requirement that all students applying to NCI have access to a suitable laptop and broadband that will allow them to engage with online and other classes. A student laptop loan scheme is available for eligible students. See page 77.