NATIONAL COLLEGE OF IRELAND

MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE

FACTFILE

Spread the cost with our direct debit plan

Application
Apply online at www.ncirl.ie

Part-time Schedule

Duration
2 years: 4 semesters with an internship/practicum.

Delivery
Blended - Livestream with some on-campus stream classes, scheduled in advance.

Start Date
Sept 2024

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 an internship/practicum.

Delivery
Classes will take place face-to-face on campus.

Start Date
Sept 2024 and Jan 2025

Indicative Timetable
Students need to be available 09.00 - 18.00 Monday to Friday. Class days and times vary.

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

Course Description

This course aims to produce high-quality, technically competent, innovative graduates that will become leading practitioners in the field of artificial intelligence. The MSc in AI contains modules covering fundamental and specialised AI topics, as well as topics related to operationalisation and application of AI to solve real-world problems. All students will gain a deeper understanding of the complete development lifecycle of AI software applications from requirements elicitation and analysis, implementation, decision making, evaluation, anddocumentation.

The course will be delivered using academic research, industry defined practical problems, and case studies. This approach will naturally provide a deeper knowledge of AI and create skills required in industry such as critical thinking, problem-solving, creative thinking, communication, teamwork, and research skills.

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

- Demonstrate expert knowledge of Engineering Artificial Intelligence systems, Machine Learning, Optimisation Techniques, and the tools, techniques and technologies of Artificial Intelligence utilised in real world contexts.
- Formulate, design, implement, and evaluate novel real-world solutions at the forefront of Artificial Intelligence using the latest industry practices and standards.
- Select, assess, and apply advanced and emerging Artificial Intelligence techniques and tools to enhance decision making.
- Synthesise and communicate technical Artificial Intelligence solutions.
- Critically assess and evaluate ethical, sustainable, and responsible issues associated with the development and deployment of Artificial Intelligence systems.
- Conduct independent research in the field of Artificial Intelligence.

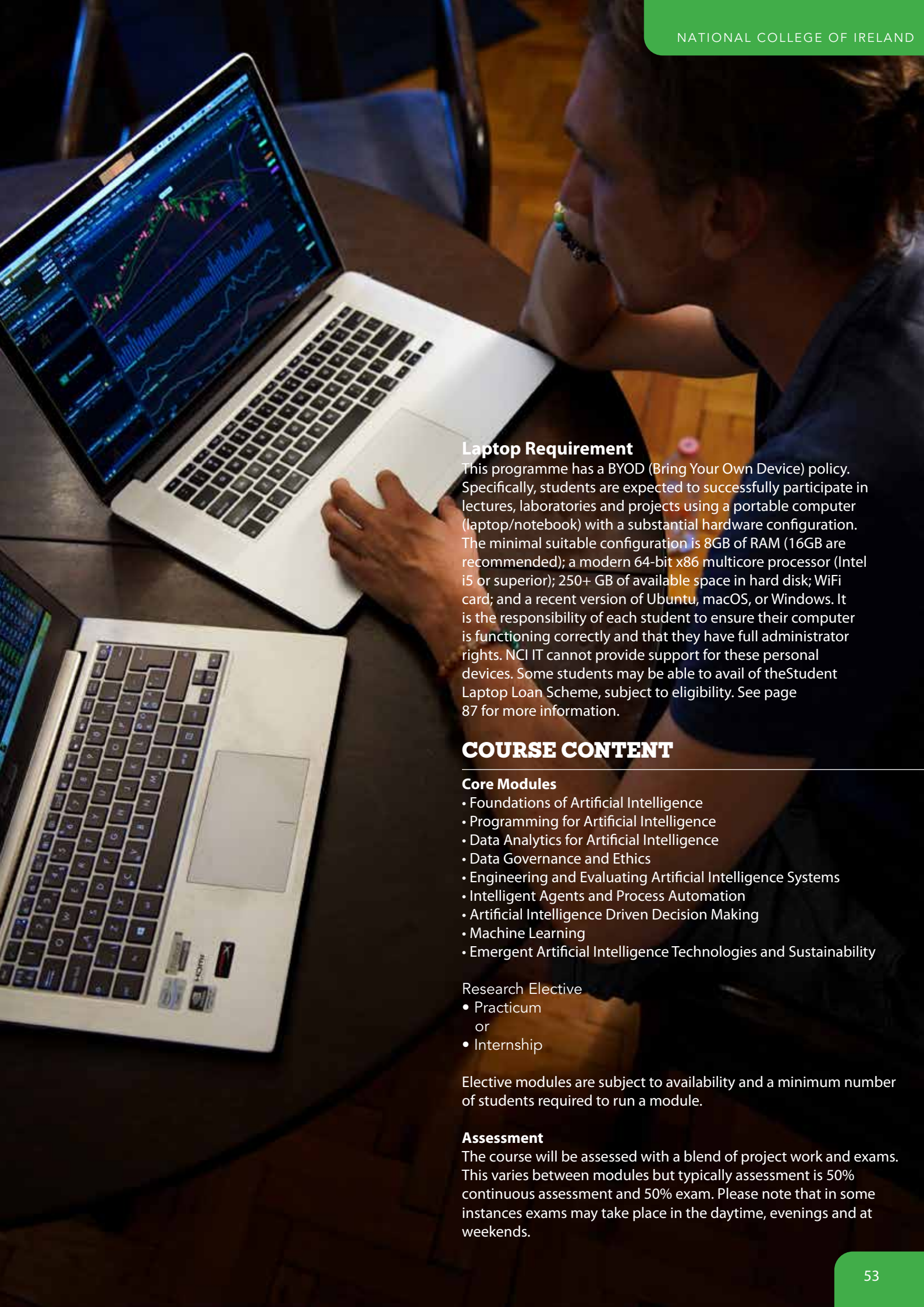
Who is this course for?

This course is ideal for graduates that are looking to progress into the emerging AI market to increase their employment potential. The course is suitable for graduates who have programming and mathematical problem-solving skills. Graduates from disciplines that have not developed these skills will need to be able to demonstrate an aptitude for programming or mathematical problem solving.

Entry Requirements

A minimum of a level 8 primary degree in Computing or a cognate area with a 2.2 award or higher or equivalent on the National Qualifications Framework. Cognate area means a STEM (Science, Technology, Engineering, and Mathematics) degree that also taught programming/ application development related modules. An assessment and/ or interview may be conducted to ascertain suitability if necessary.

The College operates a Recognition of Prior Experiential Learning (RPEL) scheme meaning 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. The programming ability of the applicant will also be assessed. Non-English-speaking applicants must demonstrate fluency in the English language as demonstrated by 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 theStudent Laptop Loan Scheme, subject to eligibility. See page 87 for more information.

COURSE CONTENT

Core Modules
- Foundations of Artificial Intelligence
- Programming for Artificial Intelligence
- Data Analytics for Artificial Intelligence
- Data Governance and Ethics
- Engineering and Evaluating Artificial Intelligence Systems
- Intelligent Agents and Process Automation
- Artificial Intelligence Driven Decision Making
- Machine Learning
- Emergent Artificial Intelligence Technologies and Sustainability

Research Elective
- Practicum
  or
- Internship

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.