

MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE

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

Start Date

Jan 2023

Full-time Schedule

Indicative Schedule

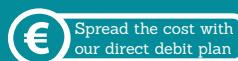
Students need to be available 09.00 - 18.00 Monday to Friday. (Class days and times vary)

Duration

1 year; 2 semesters with a final research project.

Fees

€6,800 total fee
(Fees revised annually)



Note: currently this programme is scheduled for full-time delivery in January 2023. For information on part-time, please see www.ncirl.ie.

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, and documentation.

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

Applicants are required to hold a minimum of a Level 8 honours qualification (2.2 or higher) or equivalent on the National Qualifications Framework in either STEM (e.g., Information Management Systems, Information Technologies, Computer Science, Computer Engineering) or Business (e.g., Business Information Systems, Business Administration, Economics) discipline and a minimum of three years of relevant work experience in industry, ideally but not necessarily, in management.

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 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 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 77 for more information.

COURSE CONTENT

Core Modules

Semester 1:

- Data Governance and Ethics
- Foundations of Artificial Intelligence
- Programming for Artificial Intelligence

Semester 2:

- Engineering and Evaluating Artificial Intelligence Systems
- Intelligent Agents and Process Automation
- Data Analytics for Artificial Intelligence

Semester 3:

- Emergent Artificial Intelligence Technologies and Sustainability
- Machine Learning
- Artificial Intelligence Driven Decision Making

