

Postgraduate Diploma in Science in Artificial Intelligence

(Blended/Online Delivery) (1 Year)

This is a blended/online learning course. Classes will be live online and will cover theoretical and practical content through interactive classes and support from lecturers and lab assistants. At certain limited and pre-scheduled times there will be opportunities for on-campus sessions. These on-campus sessions will also be dual delivered so students who do not wish to attend campus for these sessions will have the option of attending them online.

Location: Online (with limited classroom sessions)	Duration: September to December 2024, January to May 2025 and May to August 2025.
Start Date: The course is expected to start in the week commencing 23rd September.	Applications: Apply online at www.springboardcourses.ie
Indicative Schedule: Monday, Wednesday and a number of Thursdays 18.00 – 22.00. Career Bridge classes will be delivered one day per week in Semester 1 from 17.00 to 18.00. Day to be confirmed.	Fees: A student contribution fee of €650 is applicable if you are in employment. No fees applicable if you are unemployed. The scheme does not cover any allowance for books and materials. If a student contribution fee is applicable this must be paid in full no later than Friday, 15th November 2024.

Course Description

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

This course 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.

Career Prospects

According to a recent Graduate Outcomes Survey – Class of 2018 released on June 2020 by the Higher Education Authority, ICT graduates receive the highest earnings nine

months after graduating compared to the overall younger graduate average based on the analysis of the destinations of students who graduated in 2018.

Award and Progression

The Postgraduate Diploma of Science in Artificial Intelligence is awarded by QQI at level 9 on the National Framework for Qualifications. Students who successfully complete this course may top up to the MSc in AI at National College of Ireland (This is not included under Springboard + - an additional fee would apply).

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 in Computing or a Cognate area. Candidates are expected to have programming ability. 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 for candidates who do not meet the normal academic requirements.

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 an IELTS academic score of at least

6.0 or equivalent. [English Language Requirements | National College of Ireland \(ncirl.ie\)](http://www.ncirl.ie).

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 laptop computer with a substantial hardware configuration. A suitable configuration is 8GB of RAM (16GB are recommended); a modern 64-bit x86 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 the student to ensure their laptop is functioning correctly and that they have full administrator rights to the machine.

NCI IT does not provide support for personal devices. It is the responsibility of each student to ensure their computer is functioning correctly and that they have full administrator rights.

Free Laptop loan for eligible students on this course:

Students who are eligible for HEA funding for this course may also be eligible for a free laptop provided on a loan basis for the duration of the programme. This will be a suitable specification machine for completion of the programme but must be returned once you have finished your course. Overall numbers of laptops available are subject to maximum numbers and no other alternatives can be offered.

Check <https://www.ncirl.ie/Laptop-Loan-Scheme> for updates on the next opening date for applications.

Course Content (Blended/Online Delivery) (1 Year)

Semester 1:

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

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

Your Careers Advisor will support you in identifying relevant employment during the course or within three months following completion of the course.

