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Postgraduate Certificate in Artificial Intelligence-Level 9

What is Artificial Intelligence?

Artificial Intelligence (AI) is one of the most popular areas in computer science and engineering. AI deals with intelligent behaviour, learning and adaption in machines, robots and body-less computer programs. This module serves as an introduction to the broad field of AI. The course provides an introduction to classical AI as well as non-classical AI. It introduces logic and automated reasoning, probabilistic reasoning and reasoning under uncertainty. It also covers Biologically inspired AI, the Ethics of AI and the links between AI and Machine Learning. Next the student will develop key practical skills and a foundation in Machine Learning techniques including data analysis and artificial intelligence and their application on specific problems in Machine Learning, such as, prediction, classification, recommendation and optimization. The third module will provide the student with a detailed understanding of some tools used for AI. The student will gain a comprehensive understanding of the components of a text analytics and Natural Language Processing (NLP) system and gain an appreciation of the mechanisms required for Computer Vision implementation.

How will the course be delivered?

This course will be delivered part time (online) in the evenings. Delivery in this mode will facilitate upskilling and reskilling the widest possible group of company employees without requiring employees to cease employment while doing the course. As the course will be delivered online, it won't matter where in the country students are located.

The course is designed to run in part-time mode in the evenings. The student will study one module at a time per session with three sessions across an academic year.

Minimum Entry Requirements

The course will be available to applicants who meet the following criteria:

- Level-8 qualification in computing.
- Level-7 qualification in computing with 3 years appropriate work-experience.
- Candidates who do not hold these qualifications but have significant relevant experience may also be eligible for consideration via Recognition of Prior Learning (RPL) which includes a combination of education, training and work experience.
- The course will also be suitable for candidates with backgrounds in mathematics and physics.

Is there a demand for graduates with these skills?

The Forecasting the Future Demand for High-Level ICT Skills in Ireland, 2017-2022 report:

"Artificial intelligence and cognitive system (AI/CS) technologies started to take centre stage in the past 12 months across the globe and continue to attract new investments and attention from all industries."

The Digital Transformation: Assessing the Impact of Digitalisation on Ireland's Workforce2018 Report states that "With industries investing aggressively in projects that utilise cognitive/AI software capabilities, it is forecast that cognitive and AI spending will grow to $52.2 billion in 2021 and achieve a compound annual growth rate of 46.2% over the 2016–2021 forecast period."

Course Structure

Modules	Mandatory/Elective	No of ECT credits
Artificial Intelligence 1	Mandatory	10
Machine Learning	Mandatory	10
Artificial Intelligence 2	Mandatory	10
Placement	Elective	10
Employability Skills	Elective	10

Timetables will be issued early to mid-September from the Department of Administration.

Delivery Notes
- 100% Online, all students registering on the course should check the landing page for additional course information.
- A 2MB Internet connection is recommended for online classes. Additional notes and student updates will be provided via Blackboard which is the online teaching support system (Virtual Learning Environment (VLE)).
- It is recommended that students have a headset for online classes and use a Chrome or Firefox web browser.
- When students have registered they will have access to additional detailed information about course delivery and college services through our website. Students should make sure they familiarise themselves with this information.

Course Fee
Springboard will cover 90% of the course fees for students who are currently in employment and 100% of the fees for students who are currently unemployed. The student contribution of 10% is €385.

For students completing the Springboard Postgraduate Certificate in Artificial Intelligence wishing to take the additional 60-credit dissertation leading to the award of an MSc in Artificial Intelligence Research, the fee will be an additional €1900. The Dissertation can be completed part-time and on-line.

Application Form
Applications can be made via the Springboard website www.springboardcourses.ie All applicants are required to provide a copy of their C.V., a copy of their highest education qualification certificate and documentary evidence of their eligibility for Springboard including residency (i.e. that they have been ordinarily resident in Ireland or the state EEA/EU/UK/Switzerland for 3 out of the last 5 years). Eligibility criteria for Springboard is available on the Springboard website at https://springboardcourses.ie/eligibility

Registration
Registration with LYIT will be in August 2021 through the Department of Admissions. The course will start on 1st September 2021.

Further Information
For further information on the course, contact Thomas Dowling, Head of Department of Computing, Letterkenny Institute of Technology on **E- Mail: thomas.dowling@lyit.ie**

For further information on applying via Springboard contact the Springboard Office, Letterkenny Institute of Technology on **E- Mail: springboard@lyit.ie**