

Fundamentals of Robotics

This programme will provide an introduction and grounding in the understanding of robotics, industry specific use cases, business case rationale and technical operation for industrial and mobile robotics in advanced manufacturing operations across various business verticals.



For more information and to apply, visit

www.celtec.ie/fundamentalsofrobotics

Course Learnings



Robotics Principles and Technologies

Develop a foundational understanding of industrial and mobile robotics, including robot types, core components, mechatronics, and the evolution of robotics in advanced manufacturing.



Industrial Applications and Robot Selection

Learn how to identify suitable robotic technologies and applications by evaluating manufacturing processes, industry use cases, and robot capabilities such as payload, reach, and work envelope.



Robot Systems, Safety, and Integration

Gain an understanding of robot system architecture, safety principles, coordinate systems, end-of-arm tooling, sensors, and vision technologies used in industrial automation.



Robot Programming and Simulation

Build introductory skills in robot programming, online and offline programming methods, robot manipulation, and the use of simulation tools for system design and validation.



Automation Readiness and Manufacturing Innovation

Develop the knowledge to evaluate how robotics can improve productivity, quality, and operational efficiency while supporting career progression in modern advanced manufacturing environments.



APPLY

Expression of Interest

AT A GLANCE



DURATION

4 Classroom Days



LOCATION

CELTEC, Celbridge, Co. Kildare, W23 HCK2



DELIVERY

Classroom Based



SUITABILITY

Those in employment in the Kildare and Wicklow regions



COST

This course is partially funded under the Skills To Advance initiative for eligible applicants



COURSE REQUIREMENT

No prior knowledge of Robotics is expected. Basic PC Skills and solid understanding of English is essential



CERTIFICATION

QQI Level 6 Micro Qualification in Fundamentals of Robotics