

Industry
4.0

Skillnet

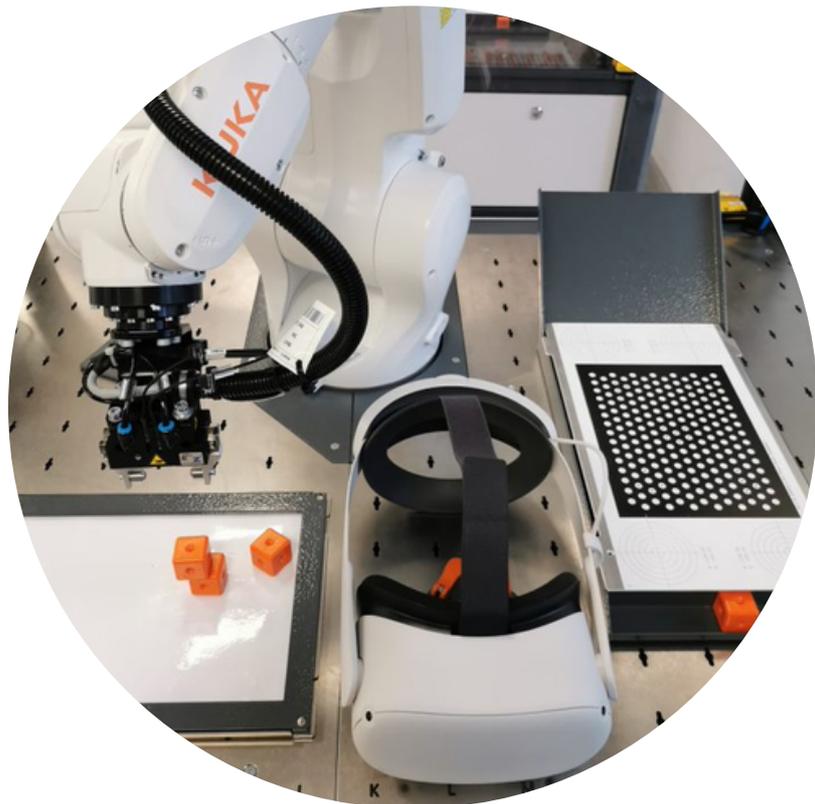
Introduction to Industrial Robotics

A Hands-On Introduction to Industrial Robot
Programming, Operation and Simulation

Programme Description

This introduction to Industrial Robotics course gives a general overview of the operation, programming, simulation, and commissioning of industrial robots.

During this one-day introductory course, participants will gain valuable knowledge and experience in the world of industrial robotics, as they freely jog their own robot and model their own virtual robot cell.



Who should attend

Anyone with an interest in the field of robotics and automation (Engineers, Mechanical/Electrical Fitters, Technicians, PLC Technicians, Students in any of the above fields)

Programme Delivery

Classroom attendance is advised.

Duration:

1 day (with another 4-day course to follow)

Location:

W8 Center, Manorhamilton, Co. Leitrim

Course Outcome

During the introductory course, participants will learn about:

- Kuka robot operation, as they jog and teach points using the robot pendant.
- KukaSim simulation software, by modelling their own virtual robot workspace complete with a conveyor system.
- Virtual Commissioning, using virtual reality to monitor the performance of their virtual workspace from perspectives which are impossible in the real world.
- This one-day introductory course will be followed by another four-day “Industrial Robot Operator” course in the future. The four-day course will train operators in the basics of robot operation, programming, mastering, error-fixing, simulation, and virtual commissioning.

Course Overview

This course is aimed at students and professionals in the manufacturing industry, providing them with an essential link to industrial robotic processes and technologies.

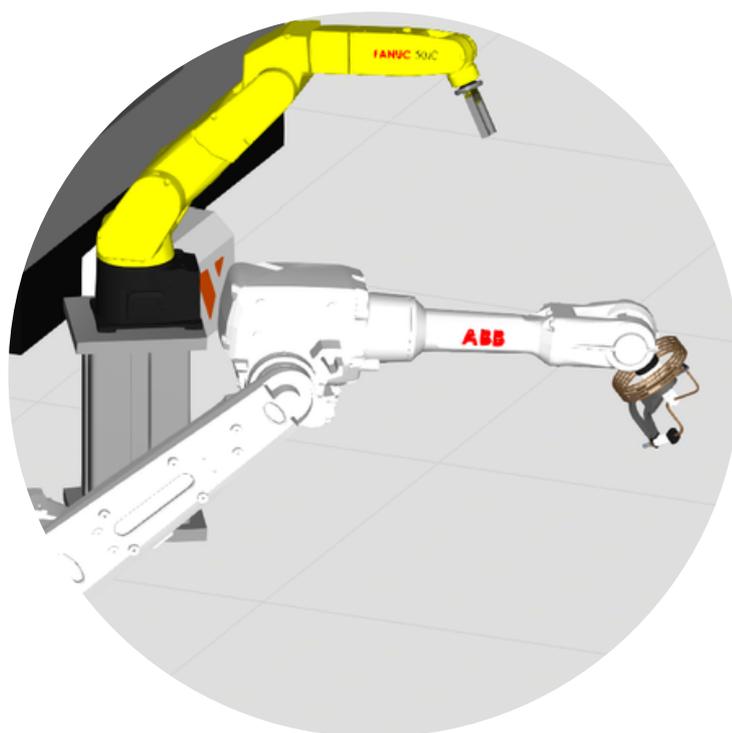
Six-axis robots have been the industry standard for many processes including welding, painting, assembly, packaging, since the dawn of industry 3.0.

Historically, this technology has been largely confined to high volume manufacturing processes, particularly in the automotive, electronics, and pharmaceutical industries.

In recent years however, the status quo has shifted towards automation in all industries, particularly since the advent of Industry 4.0. We are now seeing increasing demand for robotics and automation from all industries such as:

- Quarrying and mining; for packing and palletising heavy materials.
- Small Tool-and-Die makers, for automatic workpiece and tool changes.
- Logistics and postal companies; for automatic storage and retrieval and sorting.
- Factories and Pharmaceutical Plants; for assembly, packaging and improving quality control.
- Pharmaceutical companies; for quality control.
- Construction; for off-site manufacturing of modular homes and structural components.

The growing adoption of industrial robots has left a huge demand for robot operators, programmers, and integrators, while leaving a skills gap among factory fitters and engineers who may have the underlying skills to work with these kinds of systems, but still require the necessary training to service, commission, and operate these robots.

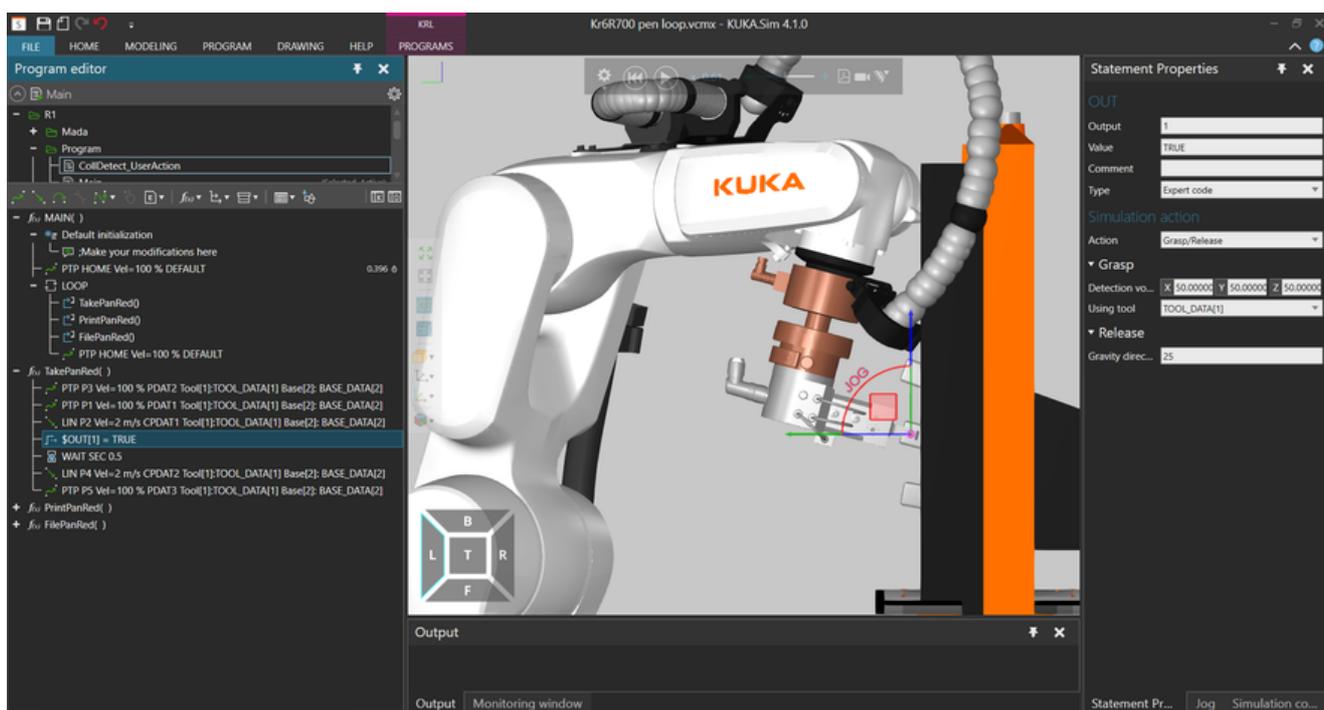


Module Teaching and Learning Strategy

Most of the training day will be hands-on and immersive, while an overview of the field of robotics theory will be taught. Participants will physically operate their own robot, program on the robot pendant, virtually model on our laptops and virtually commission on our VR headsets.

Prerequisites

There are no mandatory prerequisites for this course. We encourage anyone with an interest in robotics to attend our introductory course.





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