Course : Robot FANUC R30ia / R30ib / R30ib+, advanced programming

Practical course - 5d - 35h00 - Ref. RQE
Price : 3560 CHF E.T.

This course is designed for anyone in charge of integrating or optimizing a FANUC robotic system. You will learn how to configure and program the robot in its environment, in compliance with specifications and cycle times, and how to commission it according to the manufacturer's recommendations.

Teaching objectives

At the end of the training, the participant will be able to:

- Design a complete programmed robot cycle to integrate a new robot application
- Implement complex programming instructions in TPE
- Understand the basics of programming in the KAREL language
- Save and reload the program

Intended audience

Technicians, programmers, project managers, application engineers wishing to acquire skills in advanced programming of a FANUC robot.

Prerequisites

Mastery of basic TPE programming in FANUC robotics.

Practical details

Hands-on work

Numerous robot simulator exercises + training robot to illustrate each half-day of training.

Teaching methods

This course can be delivered in-house on a real robot, subject to logistical conditions.

Course schedule

PARTICIPANTS

Technicians, programmers, project managers, application engineers wishing to acquire skills in advanced programming of a FANUC robot.

PREREQUISITES

Mastery of basic TPE programming in FANUC robotics.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

1 Safety in industrial robotics

- Personnel safety.
- Security of resources.
- Introduction to robot safety standards.
- Presentation of safety features and the emergency stop chain.
- Wiring to be carried out.

2 Robot programming, preparation

- Configuration of payload data.
- Program architecture and organization.
- Set up and use inputs and outputs.

3 Robot programming, complex instructions

- Operating mode management.
- Optimize trajectories (speed, cycle time, smoothing, etc.).
- Use of registers (R) and position registers (PR).
- Robot configuration.
- Explanation of UOPs, remote program startup.
- Introducing the DSC (Dual Safety Check) option.

Hands-on work
Learn the robot's cues and implement a complete program according to the learner's application.

4 Introduction to the KAREL language

- Introduction to KAREL programming.
- FANUC programming environment.
- Data declaration.
- Can be programmed in KAREL.

Hands-on work
Roboguide example program, then transfer to training robot.

5 Backup and restoration

- FANUC file management.
- Extensions for backup files.
- Controller start-up modes.
- Overview of backup types.
- Restore backups.
- Automatic backup.

Hands-on work
Backup and restore the program and data used during training.