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# Course : Industrial robotics, the basics

*Practical course - 2d - 14h00 - Ref. RWR*
*Price : 1310 € E.T.*

This course will introduce you to the range of robotics offered by the main manufacturers. You'll learn how to determine the characteristics of a robotic installation, how to choose the right technologies according to the type of project, the general principle of programming, and the safety aspect of a robot.

## Teaching objectives

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

- Discover the robotic offer of the main manufacturers
- Know the characteristics of a robot
- General programming principles
- Mastering the safety aspects of a robot

## Intended audience

Operators, set-up personnel, technicians, occasional workers, anyone wishing to learn the basics of industrial robotics

## Prerequisites

No special knowledge required.

## Practical details

**Hands-on work**

Numerous exercises on robot simulator.

**Teaching methods**

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

## Course schedule

**PARTICIPANTS**

Operators, set-up personnel, technicians, occasional workers, anyone wishing to learn the basics of industrial robotics

**PREREQUISITES**

No special knowledge required.

**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 The world of robotics in France and around the world

- Robotization.
- Why robotize?
- Robot deployment in France and around the world.
- General information and terminology.
- The various robots and their specific features (types, transportable loads, size, etc.).
- The collaborative robot.
- Building a robotic cell (carrier, electrical communication interface).
- Advantages and disadvantages of robotizing a plant.

## 2 Presentation of a robotized cell

- Example of a robotized cell.
- The programming interface.
- The on-board tool.
- Presentation of a range of robots.
- Example of a robot bay.
- Layout of a typical cell.

## 3 Displacement and programming principle

- Robotic position and speed control.
- Manual movement.
- Notions of part and tool markings.
- Programming principle.
- Movement types (movement instructions).
- Different types of programming (off-line on simulator and by learning).
- Introduction to simulator programming.
- Concept of production cycle.

### Hands-on work

Set up a robotic cell using simulation software: configuration, importing components and positioning, learning robot reference points, creating a simple trajectory.

## 4 Safety management

- Personnel safety.
- Security of resources.
- Operator - Robot working conditions (collaborative concept).
- Robotic machine specifications.
- The requirements of a collaborative installation.
- Risk analysis of a robotized and collaborative machine.
- Safety function.

## 5 Robot cell maintenance

- Preventive maintenance (maintenance schedule).
- Curative maintenance.
- The skills required for maintainability.
- Control trajectories.
- Maintenance contracts with the manufacturer.

## Dates and locations

**TEACHING AIDS AND TECHNICAL RESOURCES**

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

**TERMS AND DEADLINES**

Registration must be completed 24 hours before the start of the training.

**ACCESSIBILITY FOR PEOPLE WITH DISABILITIES**

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

**PARIS LA DÉFENSE**
2026 : 30 Mar., 22 June, 5 Oct., 30 Nov.