



Training planner 2024

Robotics Benelux

Skilled and qualified people are necessary to reduce production costs and to exploit the full potential of modern robot technology. Many students are trained in our Benelux facilities every year.

Basic IRC5 (2 days)

Day 1: Basic Robot Safety & Operations

- IRC5 System Introduction
- Working safely with robots
- Jogging principles
- Get familiar with FlexPendant
- Starting up the system
- Collision management

Day 2: Movement instructions & Program structure

- RAPID Program Structure
- Saving data
- Programming and modifying movement instructions
- Understanding TCP and Work Objects

Introduction to ABB robots and IRC5 controller. Program simple movements and perform basic actions.

Programming RAPID (1 day)

- Back-up structure
- Tool and Work Objects definition
- Movements with offset and Reltool Functions
- Basic I/O Communication

Write and modify basic programs using various programming instructions and features of the ABB RAPID programming language.

Extended Programming RAPID with RS (2 days)

- Programming RAPID with RobotStudio editor
- I/O configuration overview
- Conditional instructions
- Operator input instructions
- Manipulator calibration principles

Get acquainted with RobotStudio Basic online programming and configuration. Write and modify more extended RAPID code using various programming instructions and functions. Understanding the difference between Updating Revolution Counters and Fine Calibration.

Basic OmniCore (2 days)

Day 1: Basic Robot Safety & Operations

- OmniCore System Introduction
- Working safely with robots
- Jogging principles
- Get familiar with FlexPendant
- Starting up the system
- Collision management

Day 2: Movement instructions & Program structure

- RAPID Program Structure
- Saving data
- Programming and modifying movement instructions
- Understanding TCP and Work Objects

Introduction to ABB robots and OmniCore controller. Program simple movements and perform basic actions.

RobotStudio 6 Premium (Basic, 2 days)

- Virtual Robot Station set-up
- Basic Graphical Programming
- External Axis Programming
- Advanced Graphical Programming

This training is intended for robot programmers and design engineers. It provides a general insight into the possibilities of designing and programming in a virtual environment. The participant will be able to build a standard virtual robot station and program it offline. Knowledge of CAD and RAPID is an advantage.

RobotStudio 6 Premium (Advanced, 2 days)

- Repetition RobotStudio 1
- Event Manager
- Smart Components
- MultiMove
- Mechanisms
- Conveyor Tracking
- ScreenMaker
- Layout Tools
- Physics

This course is targeted towards experienced RobotStudio 1 users that want to expand their knowledge and learn some of the more advanced features in RobotStudio.

Commissioning Tips & Tricks (1 day)

- Lifting the robot
- Securing the robot
- Manually releasing the brake
- Gravity parameters
- Fitting equipment on the robot
- Tooldata, Loaddata and robotload
- Working range and restricting working range
- Calibration and synchronization
- Electrical connections and safety connections
- I/O cards
- Setup Profinet/profisafe parameters
- Signal analyzer

This information session is for junior robot engineers who need tips and tricks at the design, installation and commissioning of a robot in a production cell. Learn to avoid electrical and mechanical installation mistakes and be effective with commissioning tasks you have to perform.

SafeMove (Basic/Pro, 2 days)

- SafeMove Functionality
- SafeMove Graphical Configuration
- SafeMove Operation
- SafeMove Safety I/O Configuration
- Conditional Safety Configuration

Knowledge of how to operate and program IRC5 is required. The target group is everyone involved in the design, commissioning or use of software-based configurations and safety zones.

Advanced RAPID (2 days)

- Tools and Work Objects
- RobotStudio RAPID editor
- I/O and system parameters
- Modules and program organization
- Loops
- Routines and events
- World zones
- Interrupts and traps
- Error handling
- Motion performance and trigg instructions
- Program data and arrays
- User interaction
- Searching and program displacement

This course is a follow-up to the Basic IRC5 or OmniCore Programming and is intended for everyone involved in the design, commissioning or use of an automated system that contains an industrial robot. By using more advanced programming instructions and functions, one learns to create more complex programs.

Electrical Service IRC5 (4 days)

- System introduction
- Safety
- Use of the FlexPendant
- Jogging in different coordinates system
- Memory structure; back-up and restore
- Restart and Reboot procedures
- Create OS with RobotStudio
- Description of the IRC5 Single controller and safety chain
- Electrical circuit diagrams of the controller and manipulator
- Motor Drive system; calibration of the robot
- Troubleshooting

Learn how to locate and solve electrical defects as well as how to carry out preventive electrical maintenance on the robots. Understanding of the controller architecture.

Electrical Service OmniCore - V250/C90 (4 days)

- System introduction
- Safety
- Use of the FlexPendant
- Jogging in different coordinates system
- Memory structure; back-up and restore
- Restart and Reboot procedures
- Create OS with RobotStudio
- Description of the OmniCore Single controller and safety chain
- Electrical circuit diagrams of the controller and manipulator
- Motor Drive system; calibration of the robot
- Troubleshooting

Learn how to locate and solve electrical defects as well as how to carry out preventive electrical maintenance on the robots. Understanding of the controller architecture.

Transition to OmniCore (1 day)

- New controllers and (collaborative) robots
- Working with new FlexPendant
- Wizard Easy Programming for OmniCore robots

Get familiar with the new OmniCore FlexPendant and connections. Presentation of the new hardware components.

Cobot - Wizard/SkillsCreator (1 day)

- Health & Safety
- Introduction to OmniCore and ABB robots
- Introduction to Collaborative Robots
- Lead-through (moving the robot by hand)
- Wizard Introduction
- Skill Creator
- Arm Side Interface

This course is for robot programmers that want to learn more about ABB's collaborative robots and tools.

Cobot - general safety rules (1 day)

- Human Robot Collaboration
- Standards, Rules & Regulations
- Designing an HRC Application
- HRC - Risk Assessment
- SafeMove Setup
- Validation and Safety Report

This training is targeted to first time collaborative robot users.

SafeMove for collaborative robots (2 days)

- Health & Safety
- Introduction to SafeMove
- The safety module
- Setting up a safety user
- Introduction to Visual SafeMove
- Introduction to the FlexPendant interface
- Simulating safe I/O
- General configuration
- Configuring supervision functions
- Validation and safety report
- Using safe I/O
- Managing safety configurations
- SafeMove maintenance
- Reinstall RobotWare and restore safety

This training is targeted to personnel working with installation and configuration of the safety module, SafeMove, and the functional safety options.



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