ABB University Turkey

ABB Robotics Training Center

IRC5

- ✓ IRC5 Robot Programming Basic
- ✓ IRC5 Robot Programming Advance
- ✓ IRC5 Electrical Troubleshooting
- ✓ IRC5 Operator
- ✓ IRC5 Arc Welding
- ✓ IRC5 Spot Welding *(Soon)*
- ✓ IRC5 SafeMove
- ✓ IRC5 Conveyor Tracking
- ✓ IRC5 PickMaster® *(Soon)*
- ✓ RobotStudio®
- ✓ RobotStudio® PowerPacs
  - • RobotStudio® Machining PowerPac
  - • RobotStudio® Picking PowerPac *(Soon)*

IRC5P

- ✓ IRC5P Robot Programming
- ✓ IRC5P Operator
- ✓ RobotStudio®
- ✓ RobotStudio® PowerPacs
  - • RobotStudio® Painting PowerPac

OmniCore

- ✓ OmniCore Robot Programming Basic
- ✓ OmniCore Robot Programming Advance
- ✓ OmniCore Electrical Troubleshooting
- ✓ Omnicore Operator
- ✓ RobotStudio®

Basic Programming
IRC5
IRC5 PG1

Course Goal

The goal of the course is that the participant after completed course should be able to create, test and optimize a simple, structured pick and place application.

Course Objectives

Upon completion of this course, the participant will be able to:

– Jog the robot both linear, reoriented and axis by axis
– Structure a program using routines, modules and named data
– Understand the difference between Task and Program
– Recognize if the revolution counters are ok and to reset if needed
– Create and define tool & workobje data
– Save programs and backup the system
– Use RobotStudio® for editing the robot program both online and offline

Participant Profile

This course is the first step to become a robot programmer and for personnel with a need to modify existing programs.

Prerequisites

Basic PC knowledge and a technical background are facilitating.

Course Content

– Health & Safety
– Introduction to IRC5 Controller and ABB robots
– Jogging (Moving the robot with the joystick)
– Basic Move Instructions
– Program structure (Datatypes, Instructions Routines, Modules)
– Revolution counters calibration
– Tools & Workobjects
– Saving data (Program, Backup, Diagnostics)
– Virtual Controller
– RobotStudio® Rapid Editor
– I/O Instructions
– Most common instructions and program Logic
– Most Common functions

Course Information

The course is instructor-led. Approximately 75% of the course time is hands-on exercises.

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click to here for directions to Istanbul
Click to here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

Basic Programming
Training Agenda
IRC5 PG1

Day 1

AM
- Health & Safety
- Introduction to IRC5 Controller and ABB robots
- Introduction to Flexpendant
- Jogging (Moving the robot with the joystick)
- Practical exercises

PM
- Create and define of tool data
- Create and define of workobject data
- Basic Move Instructions
- Practical exercises

Day 2

AM
- Program structure (Datatypes, Instructions, Routines Modules)
- I/O Instructions
- Practical exercises

PM
- Most common instructions and program Logic
- Saving data (Program, Backup, Diagnostics)
- Restart Types
- Practical exercises

Day 3

AM
- Revolution counters calibration
- Practical exercises
- Virtual Controller
- RobotStudio® Rapid Editor

PM
- Practical exercises
- Training assessment – Q&A - Exam

ABB

Advance Programming
IRC5

IRC5 PG2

Course Goal

The purpose of the training is to learn advanced commands and programming techniques and the application is to enable it to use extended programming functions.

Course Objectives

Upon completion of this course, the participant will be able to:

– Create and define work objects and advanced tool data
– Use RobotStudio® for editing the robot program both online and offline
– Create and use modules, routine and data
– Program search instructions
– Program position displacement instructions
– Program error handling instructions
– Program interrupt instructions and traps
– Use joint configuration instructions
– Use motion control instructions

Participant Profile

Advanced Programming is intended for participant that have attended the basic programming course but require greater knowledge of programming features.

Prerequisites

The participant must have completed the IRC5 PG1 Training or have corresponding experience.

Course Content

– Health and safety
– Tool and Workobjects
– RobotStudio® Rapid editor
– I/O and system parameters
– Modules and program organization
– Loops
– Program data and arrays
– Routines and events
– WorldZone
– Interrupts and traps
– Error handling
– Motion performance and trigg instructions
– Searching and program displacement
– User interaction instructions
– Robotware system installation/upgrade

Course Information

The course is instructor-led. Approximately 75% of the course time is in RobotStudio®

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

COURSE DESCRIPTION

Advance Programming
Training Agenda
IRC5 PG2

Day 1

AM
- Health and safety
- Tool and Workobjects
- RobotStudio® Rapid editor
- I/O and system parameters
- Practical exercises

PM
- Modules and program organization
- Loops- Program data and arrays
- Routines and events
- Practical exercises

Day 2

AM
- WorldZone
- Interrupts and traps
- Practical exercises

PM
- Error handling
- Motion performance and trigg instructions
- Practical exercises

Day 3

AM
- Searching and program displacement
- User interaction instructions
- Practical exercises

PM
- Robotware system installation/upgrade
- Training assessment – Q&A - Exam

ABB

Electrical Troubleshooting
IRC5

IRC5 EL

Course Goal

After this course the participant should be able to perform an effective electrical troubleshooting on an IRC5 system.

Course Objectives

Upon completion of this course, the participant will be able to:

– Work systematically when troubleshooting
– Troubleshoot based on fault symptoms and Units
– Use practices that is safe for both equipment and personnel
– Recognize if the revolution counters are ok and to reset if needed.
– Reinstall RW5 and RW6 systems
– Configure ABB IO units

Participant Profile

This training is targeted to service engineers and personnel performing electrical service.

Prerequisites

Participants must be able to read circuit diagrams and use a multi-meter.

Course Content

– Health & Safety
– Safety: Electrical Troubleshooting
– Electrostatic Discharge
– IRC5 Overview: Electrical Units & Components
– Introduction to troubleshooting
– Troubleshooting by fault symptoms
– Troubleshooting by unit
– Troubleshooting Exercises
    • Power
    • Run chain
    • Drive system/Mechanical unit
– Revolution Counters
– Calibration
– Overview of system parameters
– Backup/Restore
– Reinstall Software
– IO Configuration of ABB Units

Course Information

The course is instructor-led. Approximately 75% of the course time is hands-on exercises.

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

COURSE DESCRIPTION

Electrical Troubleshooting
Training Agenda
IRC5 EL

Day 1

AM	-	Health & Safety
	-	Introduction to IRC5 Controller and ABB robots
	-	Safety: Electrical Troubleshooting
	-	Introduction to troubleshooting
	-	
PM	-	System Overview: Electrical Units & Components
	-	Troubleshooting: Power
	-	Electrostatic Discharge

Day 2

AM	-	Troubleshooting by fault/unit symptoms
	-	Troubleshooting Exercises
		• Power
		• Run chain
PM	-	Troubleshooting Exercises
		• Drive system/Mechanical unit
	-	IO Configuration of ABB units
	-	System parameters overview
	-	Backup & Restore
	-	Practical exercises

Day 3

AM	-	Restarts
	-	Revolution counters calibration
	-	Practical exercises
	-	Restarts
	-	Event Logs
PM	-	Reinstall RW5 and RW6 systems
	-	Practical exercises
	-	Training assessment – Q&A - Exam

Operator
IRC5
IRC5 OP

Course Goal

After completed course the participant should be able to confidently operate a production robot using the FlexPendant.

Course Objectives

Upon completion of this course, the participant will be able to:
– Jog the robot to any position with appropriate motion mode
– Start and stop the robot program in a safe manner
– Restart the program from the start
– Recognize if the revolution counters are ok and to reset if needed
– Backup and restore the data and programs
– in the controller
– Perform a warmstart of the controller
– Modify robot positions if necessary
– Active/deactivate motion supervision
– Read and save event logs
– Read the values of digital inputs and simulate digital outputs

Participant Profile

This course is intended for personnel working as or about to become, robot operators.

Prerequisites

No prerequisites.

Course Content

– Health & Safety
– Introduction to IRC5 Controller and ABB robots
– Jogging (Moving the robot with the joystick)
– Basic Move Instructions
– Program structure (Instructions, Routines and Modules)
– Revolution counters calibration
– Saving data (Program, Backup, Diagnostics)
– Restarts
– Handling I/O Instructions
– Most common instructions and program Logic
– Modify robot positions
– Most Common Offs - Reltool functions
– Event Logs
– Motion Supervision

Course Information

The course is instructor-led. Approximately 75% of the course time is hands-on exercises.

Duration: 2 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

Operator
Training Agenda

IRC5 OP

Day 1

AM		
	-	Health & Safety
	-	Introduction to IRC5 Controller and ABB robots
	-	Introduction to Flexpendant
	-	Jogging (Moving the robot with the joystick)
	-	Practical exercises

PM		
	-	Basic Move Instructions
	-	Modify robot positions
	-	Practical exercises

Day 2

AM		
	-	Program structure (Instructions, Routines and Modules)
	-	Revolution counters calibration
	-	I/O Instructions
	-	Most Common Offs - Reltool functions
	-	Practical exercises

PM		
	-	Saving data (Program, Backup, Diagnostics)
	-	Restart Types
	-	Motion Supervision
	-	Event Logs
	-	Practical exercises
	-	Training assessment – Q&A - Exam

ABB

Arc Welding
IRC5
IRC5 ARC

Course Goal

The aim of the training is to ensure that the participant's able them to write programs for arc welding process and configure arc welding types with robots and peripheral equipment.

Course Objectives

Upon completion of this course, the participant will be able to:

– Optimizing the Arc Welding Program
– Create and define tool and workobject data
– Create and define weld and seam data
– Using the ArcWare interface
– Commission of BullsEye and SmartAc options
– Synchronous welding with external axes systems

Participant Profile

This training is aimed at the participants who wants to improve themselves in robotic arc welding Applications.

Prerequisites

The participant must have completed the IRC5 PG1 Training or have corresponding experience.
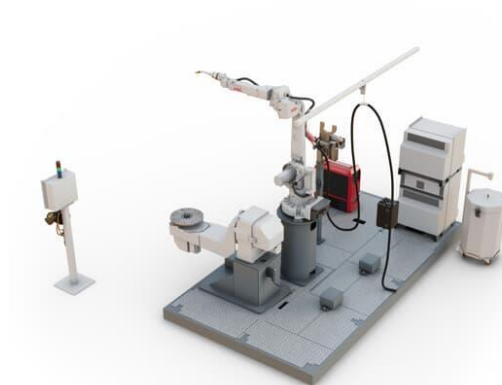
Course Content

– Health and safety
– Tool and Workobjects
– Introduction to Welding Power Sources
– Introduction to ArcWare Interface
– Most common instructions and program Logic for Arc Welding
– Create and define Arc Welding parameters
– Prepare paths and modify targets
– Commission of BullsEye
– Commission of SmarTac
– Synchronous welding with external axes systems

Course Information

The course is instructor-led. Approximately 80% of the course time is hands-on exercises.

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

Arc Welding
Training Agenda
IRC5 ARC

Day 1

AM

- Health and safety
- Introduction to Arc Welding
- Introduction to Arc Welding system parameters with ABB Robots

---

PM

- Tool and Workobjects
- Most common instructions and program Logic for Arc Welding
- Create and define seam/weld/weave data parameters
- I/O handling and system parameters for arc welding
- Introduction to BullsEye in teorical
- Introduction to SmarTac in teorical

Day 2

AM

- Introduction to peripheral equipments (Track, positioner, Torch service)
- Introduction to power source (Fronius)
- Commission of BullsEye
- Practical exercises

PM

- Commission of SmarTac
- Practical exercises

Day 3

AM

- Create programs for Synchronous welding with external axes systems
- Practical exercises

PM

- Introduction and sharing of technical reference manuals
- Training assessment – Q&A - Exam

SafeMove
IRC5
IRC5 SM

Course Goal

The purpose of the training is the participant's

to configure IRC5 robot system with SafeMove.

Course Objectives

Upon completion of this course, the participant will be able to:

- Mechanical and electrical integration of the DSQC1015 SafeMove module
- Create a Safety User
- Configure the system parameters
- Configure and handling safety I/O
- Define safety zones
- Configure the visual SafeMove module with RobotStudio®
- Testing and reporting SafeMove configuration
- Backup and restore SafeMove configuration

Participant Profile

This training is aimed at the participants who wants to deploy and improve with SafeMove robotic system commissioning engineers, robot programmers or maintenance technicians.

Prerequisites

The participant must have completed the IRC5 PG1

Course Content

- Health & Safety
- Introduction to SafeMove
- Mechanical and electrical integration of the DSQC1015 SafeMove module
- Create a system with SafeMove
- Create a Safety User
- Configure the visual SafeMove module with RobotStudio®
- Configure and handling safety I/O
- Testing and reporting SafeMove configuration
- Backup and restore SafeMove configuration

Course Information

The course is instructor-led. Approximately 80% of the course time is hands-on exercises.

Duration: 2 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

—

COURSE DESCRIPTION

SafeMove
Training Agenda
IRC5 SM

Day 1

AM		
	-	Health & Safety
	-	Introduction to SafeMove option
	-	Mechanical integration of the DSQC1015 SafeMove module
	-	Practical exercises

PM		
	-	Electrical integration of the DSQC1015 SafeMove module
	-	Practical exercises
	-	Creating the system with SafeMove
	-	Practical exercises

Day 2

AM		
	-	Create a Safety User
	-	Introduction to visual SafeMove
	-	Configure the visual SafeMove module with RobotStudio®
	-	Practical exercises

PM		
	-	Create the programs for SafeMove validation
	-	Testing the configuration and reporting
	-	Backup and restore SafeMove configuration
	-	Practical exercises
	-	Training assessment – Q&A - Exam

COURSE DESCRIPTION

Conveyor Tracking
IRC5

IRC5 CT

Course Goal

The purpose of the training is to enable the participant to integrate the mechanical and electrical components of the conveyor tracking module and auxiliary equipments and to create synchronized robot programs with conveyor tracking and functional tests.

Course Objectives

Upon completion of this course, the participant will be able to:

– Mechanical and electrical integration of conveyor tracking module
– Create system prerequisites for conveyor tracking module
– Mechanical and electrical integration of peripheral equipments
– Configuration and calibration for conveyor tracking system parameters
– Create and improve synchronized programs with conveyor tracking module

Participant Profile

This training is aimed for project and system commissioning engineers, robot programmers maintenance technicians who wants to programming and improving the robot systems with conveyor tracking option.

Prerequisites

The participant must have completed the IRC5 PG1 Training or have corresponding experience.

Course Content

– Health & Safety
– Introduction to conveyor tracking system
– Introduction to ABB conveyor tracking module
– Mechanical integration of the module
– Electrical integration of the module
– Mechanical and electrical integration of peripheral equipments (Encoder, sensor, camera, start signal)
– Configuration and calibration for conveyor tracking system parameters
– Create and improve synchronized programs with conveyor tracking module
– Testing the conveyor tracking program

Course Information

The course is instructor-led. Approximately 80% of the course time is hands-on exercises.

Duration: 1 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Conveyor Tracking
Training Agenda
IRC5 CT

Day 1

AM	-	Health & Safety
	-	Introduction to conveyor tracking system
	-	Mechanical integration of the DSQC2000 conveyor tracking module
	-	Electrical integration of the DSQC2000 conveyor tracking module
	-	Mechanical and electrical integration of peripheral equipments (Encoder, sensor, camera, start signal)
	-	Practical exercises

PM	-	Create a system with conveyor tracking
	-	Configuration and calibration for conveyor tracking system parameters
	-	Create and improve synchronized programs with conveyor tracking module
	-	Testing the conveyor tracking program
	-	Practical exercises
	-	Training assessment – Q&A - Exam

RobotStudio®
IRC5-IRC5P-OmniCore
RS

Course Goal

The goal of the training is to enable the participant to use ABB RobotStudio® program to complex tasks by visualizing and programming without stopping production.

Course Objectives

Upon completion of this course, the participant will be able to:

– Build a station in RobotStudio®
– Digital twinning the production line by loading 3D equipment at the virtual station.
– Use graphical programming to program virtual robots.
– Create an advanced SmartComponent
– Create and simulate a MultiMove system
– Create a conveyor mechanism and simulate
– conveyor tracking
– Set up station with an external axis such as a track or positioner
– Use RobotStudio® for editing the robot program both online and offline
– Create a realistic station and record simulation videos for sales purposes
– Transfer programs from a virtual controller to a real controller and improve the cycle time

Participant Profile

This course is aimed at robot programmers that want to start using RobotStudio. You should have completed a basic programming course for ABB Robots or have corresponding experience.

Prerequisites

The participant must have completed the IRC5 PG1 Training or have corresponding experience.
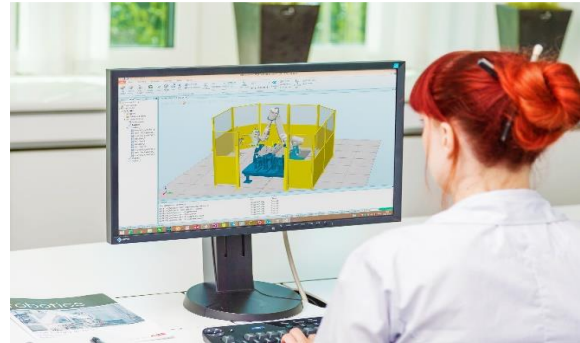
Course Content

– Health & Safety
– Create a virtual station
– Create the digital twin layout with 3D Models
– Create Tools & Workobjects
– Graphical Programming and analysis of reachability
– Using of Event Manager
– Create an advanced SmartComponent
– Create and simulate a MultiMove system
– Set up Arc Welding station with an external axis such as a track or positioner
– Create a conveyor mechanism and simulate conveyor tracking with Paint robots
– Set up station and simulate Pick&Place
– Improve the cycle time
– Transfer programs from a virtual controller to a real controller

Course Information

The course is instructor-led. Approximately 100% of the course time is in RobotStudio®.

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

RobotStudio®
Training Agenda
RS

Day 1

AM		
	-	Health & Safety
	-	Introduction to RobotStudio®
	-	Create a virtual station
	-	Create the digital twin layout with 3D Models
	-	Practical exercises

PM		
	-	Create and define of tool data
	-	Create and define of workobject data
	-	Graphical Programming and analysis of reachability
	-	Practical exercises

Day 2

AM		
	-	Using of Event Manager
	-	Create an advanced SmartComponent
	-	Create and simulate a MultiMove system
	-	Practical exercises

PM		
	-	Set up Arc Welding station with an external axis such as a track or positioner
	-	Create a conveyor mechanism and simulate conveyor tracking with Paint Robot
	-	Practical exercises

Day 3

AM		
	-	Graphical Tools - Create a realistic station and record simulation videos for sales purposes
	-	Set up station and simulate Pick&Place
	-	Practical exercises

PM		
	-	Improve the cycle time
	-	Transfer programs from a virtual controller to a real controller
	-	Training assessment – Q&A - Exam

RobotStudio® Machining PowerPac
IRC5

IRC5 RS MACHINING PP

Course Goal

The aim of the training is to ensure that the Participant able to offline programming the robot for deburring grinding, polishing and cleaning with CAD surfaces/CAM codes processes.

Course Objectives

Upon completion of this course, the participant will be able to:

– Create a program for machining, deburring, grinding polishing and surface cleaning etc.
– Create tools & workobjects according to application
– Creating operations with CAD surfaces using types of geometry
– Improve process pathways and target points and transferring to robot
– Using CAM Converter and transferring to robot

Participant Profile

This course is aimed at robot programmers that want to improve themselves in programming, design for deburring, grinding, polishing and surface cleaning applications.

Prerequisites

The participant must have completed the IRC5 PG1 and RobotStudio® Training.
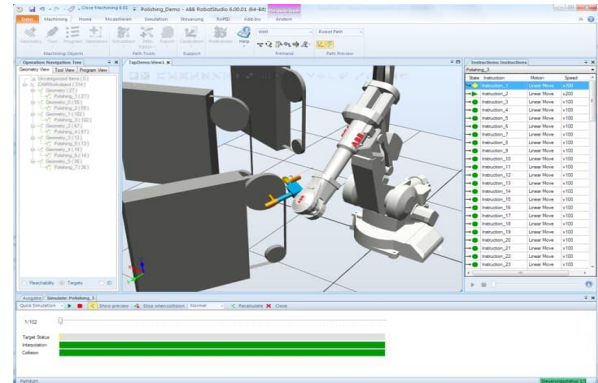
Course Content

– Health & Safety
– Introduction to RobotStudio®
– Create a virtual station
– Create the digital twin layout with 3D Models
– Graphical Programming and analysis of reachability
– Introduction to deburring process
– Introduction to polishing process
– Create tools & workobjects
– Creating operations with CAD surfaces using types of geometry
– Planning the program and test
– Improve process pathways and target points
– Transferring to robot
– Using CAM Converter and transferring to robot

Course Information

The course is instructor-led. Approximately 80 % of the course time is in RobotStudio®.

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

RobotStudio® Machining PowerPac
Training Agenda

IRC5 RS MACHINING PP

Day 1

AM
- Health & Safety
- Introduction to RobotStudio®
- Introduction to deburring process
- Create the digital twin layout with 3D Models
- Practical exercises

PM
- Create and define of tool & workobject data
- Create program for deburring process
- Creating operations for with CAD surfaces using types of geometry
- Planning the program and test
- Improve process pathways and target points and transferring
- Practical exercises

Day 2

AM
- Introduction to polishing process
- Create and define of tool & workobject data
- Create the digital twin layout with 3D Models
- Create program for polishing process
- Practical exercises

PM
- Creating operations for with CAD surfaces using types of geometry
- Planning the program and test
- Improve process pathways and target points and transferring
- Practical exercises

Day 3

AM
- Introduction to Cam Converter
- Importing the G Codes and transferring
- Practical exercises

PM
- Transfer programs from a virtual controller to a real controller
- Testing on real robot
- Training assessment – Q&A - Exam

Paint Robot Programming
IRC5P

IRC5P PG1

Course Goal

The goal of the course is that the participant after completed course should be able to create, test and optimize a simple, structured paint application.

Course Objectives

Upon completion of this course, the participant will be able to:

– Design and test paint application concepts using the Paint system at an optimal level
– Create and define tool / workobject data
– Create and run the routines and modify the targets for paint applications.
– Recognize if the revolution counters are ok and to reset if needed
– Use RobotStudio® and RobView for editing the robot program both online and offline
– Save programs and backup the system
– PaintWare and edit brush tables
– Create the system with conveyor tracking and programming the product-tracked painting process

Participant Profile

This course is the first step to become a paint robot programmer and for personnel with a need to modify existing programs.

Prerequisites

Basic PC knowledge and a technical background are facilitating.

Course Content

– Health & Safety
– Introduction to IRC5P Controller & ABB Paint robots
– Jog the robot both linear, reoriented and axis by axis
– Program basic movements
– Revolution counters calibration
– Saving data - Backup & Restore – Diagnostics
– Use RobView for managing the robot application
– Basic Move Instructions for Paint
– Tools & Workobjects
– Handling inputs and outputs and IPS Signals
– Program structure (Instructions, Routines, Modules)
– Modify the process targets
– PaintWare and brush tables
– Programming with conveyor tracking

Course Information

The course is instructor-led. Approximately 75% of the course time is hands-on exercises.

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

Paint Robot Programming
Training Agenda
IRC5 PG1

Day 1

AM		
	-	Health & Safety
	-	Introduction to Paint System
	-	Introduction to IRC5P Controller and ABB robots
	-	The Purge system
	-	Introduction to IRC5P Paint flexpendant
	-	Program basic movements and calibration

PM		
	-	Jog the robot both linear, reoriented and axis by axis
	-	Brake control in paint robots
	-	Saving data - Backup & Restore – Diagnostics
	-	Event Logs
	-	Create and define tool & workobject data

Day 2

AM		
	-	Description of the system positions
	-	Program structure (Instructions, Routines, Modules)
	-	Basic paint programming and testing in manual / auto mode
	-	Create/modify a new CalPos and jump to CalPos

PM		
	-	PaintWare and brush editor
	-	Modify the brush table and create the new brush data for process
	-	Use RobotStudio® and RobView for editing the robot program both online and offline

---

Day 3

AM		
	-	Introduction to conveyor tracking system
	-	Overview to conveyor tracking system parameters
	-	Using the common introductions for conveyor tracking
	-	Create and define conveyor-tracked work object data
	-	Programming with conveyor tracking

PM		
	-	Configuration of Counts Per Meter parameter
	-	Creating the paint program and testing in auto mode
	-	Training assessment – Q&A - Exam

Click to here to the main page.
Click to here to contact us.

COURSE DESCRIPTION

Operator
IRC5P
IRC5P OP

Course Goal

The goal of the course is that the participant after completed course should be able to create, test and optimize a simple, structured paint application by IRC5P Flexpendat.

Course Objectives

Upon completion of this course, the participant will be able to:

– Design and test paint application concepts using the Paint system at an optimal level
– Create and run the routines and modify the targets for paint applications.
– Recognize if the revolution counters are ok and to reset if needed
– Save programs and backup the system
– Recognize and correct simple errors and run service routines (eg. Emergency stop)

Participant Profile

This course is the first step to become a paint robot operator with a need to modify existing programs.

Prerequisites

Basic PC knowledge and a technical background are facilitating.

Course Content

– Health & Safety
– Introduction to IRC5P Controller & ABB Paint robots
– Jog the robot both linear, reoriented and axis by axis
– Program basic movements
– Revolution counters calibration
– Saving data - Backup & Restore – Diagnostics
– Use RobView for managing the robot application
– Basic Move Instructions for Paint
– Handling inputs and outputs and IPS Signals
– Program structure (Instructions, Routines, Modules)
– Modify the process targets
– PaintWare and brush tables

Course Information

The course is instructor-led. Approximately 75% of the course time is hands-on exercises.

Duration: 2 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

Operator
Training Agenda

IRC5P OP

Day 1

AM
- Health & Safety
- Introduction to Paint System
- Introduction to IRC5P Controller and ABB robots
- The Purge system
- Introduction to IRC5P Paint flexpendant
- Program basic movements and calibration

PM
- Jog the robot both linear, reoriented and axis by axis
- Brake control in paint robots
- Saving data - Backup & Restore – Diagnostics
- Event Logs

Day 2

AM
- Description of the system positions
- Program structure (Instructions, Routines, Modules)
- Basic paint programming and testing in manual / auto mode
- Create/modify a new CalPos and jump to CalPos

PM
- Brush editor
- Modify the brush table and create the new brush data for process
- Use RobotStudio® and RobView for editing the robot program both online and offline
- Creating the paint program and testing in auto mode
- Training assessment – Q&A - Exam

ABB

RobotStudio® Painting PowerPac
IRC5P

IRC5P RS PAINTING PP

Course Goal

The aim of the training is to enable the participant to create paint programs without stopping production and to optimize paint programs in a short time.

Course Objectives

Upon completion of this course, the participant will be able to:

– Using of the optimized paint system designing and testing their concepts
– Editing and testing paint programs in a short time with RobotStudio® Painting PowerPac

Participant Profile

This course is aimed at the participant who wants to become a paint robot programmer or learn to improve the existing paint program.

Prerequisites

The participant must have completed the IRC5P PG1 Training or have corresponding experience.

The participant must have completed the IRC5 RobotStudio ®Training.
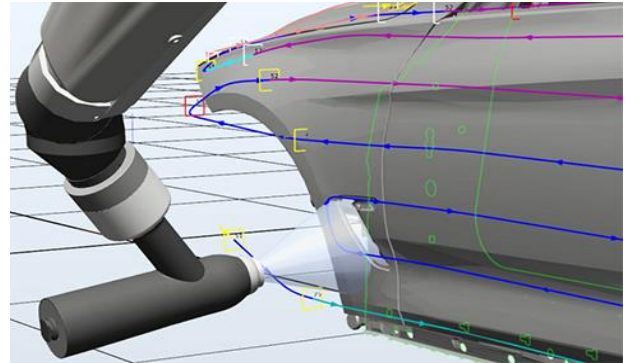
Course Content

– Health & Safety
– Introduction to RobotStudio®
– Introduction to RobotStudio® Painting PowerPac
– Create the digital twin layout with 3D Models or with Backup of real controller.
– Create and define tools & workobjects
– Create paint paths and improve programs
– Create and edit brush table and use them
– Testing the paint program
– Using of Paint Applicator
– Transfer programs to robot controller
– Painting and testing on RobotStudio®

Course Information

The course is instructor-led. Approximately 100% of the course time is in RobotStudio®

Duration: 1 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

RobotStudio® Painting PowerPac
Training Agenda

IRC5P RS PAINTING PP

Day 1

AM		
	-	Health & Safety
	-	Installation of the robot paint system on RobotStudio®
	-	Create the digital twin layout with 3D Models
	-	Create and define tool and workobject data
	-	Create paint paths and improve programs
	-	Graphical Programming and analysis of reachability
	-	Practical exercises

PM		
	-	Modify the brush table and create the new brush data for process
	-	Optimzation of programs
	-	Practical exercises
	-	Transferring to robot
	-	Using of Paint Applicator
	-	Testing and painting on RobotStudio®

Basic Programming
OmniCore

OMNICORE PG1

Course Goal

The goal of the course is that the participant after completed course should be able to create, test and optimize a simple, structured pick and place application.

Course Objectives

Upon completion of this course, the participant will be able to:

– Jog the robot both linear, reoriented and axis by axis
– Structure a program using routines, modules and named data
– Understand the difference between Task and Program
– Recognize if the revolution counters are ok and to reset if needed
– Create and define tool & workobje data
– Save programs and backup the system
– Use RobotStudio® for editing the robot program both online and offline

Participant Profile

This course is the first step to become a robot programmer and for personnel with a need to modify existing programs.

Prerequisites

Basic PC knowledge and a technical background are facilitating.

Course Content

– Health & Safety
– Introduction to OmniCore Controller and ABB robots
– Jogging (Moving the robot with the joystick)
– Basic Move Instructions
– Program structure (Datatypes, Instructions Routines, Modules)
– Revolution counters calibration
– Tools & Workobjects
– Saving data (Program, Backup, Diagnostics)
– Virtual Controller
– RobotStudio® Rapid Editor
– I/O Instructions
– Most common instructions and program Logic
– Most Common functions

Course Information

The course is instructor-led. Approximately 75% of the course time is hands-on exercises.

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

Basic Programming
Training Agenda
OMNICORE PG1

Day 1

AM
- Health & Safety
- Introduction to OmniCore Controller and ABB robots
- Introduction to Flexpendant
- Jogging (Moving the robot with the joystick)
- Practical exercises

PM
- Create and define of tool data
- Create and define of workobject data
- Basic Move Instructions
- Practical exercises

Day 2

AM
- Program structure (Datatypes, Instructions, Routines Modules)
- I/O Instructions
- Practical exercises

PM
- Most common instructions and program Logic
- Saving data (Program, Backup, Diagnostics)
- Restart Types
- Practical exercises

Day 3

AM
- Revolution counters calibration
- Practical exercises
- Virtual Controller
- RobotStudio® Rapid Editor

PM
- Practical exercises
- Training assessment – Q&A - Exam

COURSE DESCRIPTION

Advance Programming
OmniCore

OMNICORE PG2

Course Goal

The purpose of the training is to learn advanced commands and programming techniques and the application is to enable it to use extended programming functions.

Course Objectives

Upon completion of this course, the participant will be able to:

– Create and define work objects and advanced tool data
– Use RobotStudio® for editing the robot program both online and offline
– Create and use modules, routine and data
– Program search instructions
– Program position displacement instructions
– Program error handling instructions
– Program interrupt instructions and traps
– Use joint configuration instructions
– Use motion control instructions

Participant Profile

Advanced Programming is intended for participant that have attended the basic programming course but require greater knowledge of programming features.

Prerequisites

The participant must have completed the IRC5 PG1 Training or have corresponding experience.

Course Content

– Health and safety
– Tool and Workobjects
– RobotStudio® Rapid editor
– I/O and system parameters
– Modules and program organization
– Loops
– Program data and arrays
– Routines and events
– WorldZone
– Interrupts and traps
– Error handling
– Motion performance and trigg instructions
– Searching and program displacement
– User interaction instructions
– Robotware system installation/upgrade

Course Information

The course is instructor-led. Approximately 75% of the course time is in RobotStudio®

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

Advance Programming
Training Agenda
OMNICORE PG2

Day 1

AM
- Health and safety
- Tool and Workobjects
- RobotStudio® Rapid editor
- I/O and system parameters
- Practical exercises

PM
- Modules and program organization
- Loops- Program data and arrays
- Routines and events
- Practical exercises

Day 2

AM
- WorldZone
- Interrupts and traps
- Practical exercises

PM
- Error handling
- Motion performance and trigg instructions
- Practical exercises

Day 3

AM
- Searching and program displacement
- User interaction instructions
- Practical exercises

PM
- Robotware system installation/upgrade
- Training assessment – Q&A - Exam

ABB

Electrical Troubleshooting
OmniCore
OMNICORE EL

Course Goal

After this course the participant should be able to perform an effective electrical troubleshooting on an IRC5 system.

Course Objectives

Upon completion of this course, the participant will be able to:

– Work systematically when troubleshooting
– Troubleshoot based on fault symptoms and Units
– Use practices that is safe for both equipment and personnel
– Recognize if the revolution counters are ok and to reset if needed.
– Reinstall RW7 systems
– Configure ABB IO units

Participant Profile

This training is targeted to service engineers and personnel performing electrical service.

Prerequisites

Participants must be able to read circuit diagrams and use a multi-meter.

Course Content

– Health & Safety
– Safety: Electrical Troubleshooting
– Electrostatic Discharge
– OmniCore Overview: Electrical Units & Components
– Introduction to troubleshooting
– Troubleshooting by fault symptoms
– Troubleshooting by unit
– Troubleshooting Exercises
    • Power
    • Run chain
    • Drive system/Mechanical unit
– Revolution Counters
– Calibration
– Overview of system parameters
– Backup/Restore
– Reinstall Software
– IO Configuration of ABB Units

Course Information

The course is instructor-led. Approximately 75% of the course time is hands-on exercises.

Duration: 3 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Click here for directions to Istanbul
Click here for directions to Izmir

Click to here to the main page.
Click to here to contact us.

COURSE DESCRIPTION

Electrical Troubleshooting
Training Agenda
OMNICORE EL

Day 1

AM	
-	Health & Safety
-	Introduction to OmniCore Controller and ABB robots
-	Safety: Electrical Troubleshooting
-	Introduction to troubleshooting
-	

PM	
-	System Overview: Electrical Units & Components
-	Troubleshooting: Power
-	Electrostatic Discharge

Day 2

AM	
-	Troubleshooting by fault/unit symptoms
-	Troubleshooting Exercises
	• Power
	• Run chain

PM	
-	Troubleshooting Exercises
	• Drive system/Mechanical unit
-	IO Configuration of ABB units
-	System parameters overview
-	Backup & Restore
-	Practical exercises

Day 3

AM	
-	Restarts
-	Revolution counters calibration
-	Practical exercises
-	Restarts
-	Event Logs

PM	
-	Reinstall RW7 systems
-	Practical exercises
-	Training assessment – Q&A - Exam

—

COURSE DESCRIPTION

Operator
OmniCore
OMNICORE OP

Course Goal

After completed course the participant should be able to confidently operate a production robot using the FlexPendant.

Course Objectives

Upon completion of this course, the participant will be able to:

– Jog the robot to any position with appropriate motion mode
– Start and stop the robot program in a safe manner
– Restart the program from the start
– Recognize if the revolution counters are ok and to reset if needed
– Backup and restore the data and programs
– in the controller
– Perform a warmstart of the controller
– Modify robot positions if necessary
– Active/deactivate motion supervision
– Read and save event logs
– Read the values of digital inputs and simulate digital outputs

Participant Profile

This course is intended for personnel working as or about to become, robot operators.

Prerequisites

No prerequisites.

Course Content

– Health & Safety
– Introduction to OmniCore Controller and ABB robots
– Jogging (Moving the robot with the joystick)
– Basic Move Instructions
– Program structure (Instructions, Routines and Modules)
– Revolution counters calibration
– Saving data (Program, Backup, Diagnostics)
– Restarts
– Handling I/O Instructions
– Most common instructions and program Logic
– Modify robot positions
– Most Common Offs - Reltool functions
– Event Logs
– Motion Supervision

Course Information

The course is instructor-led. Approximately 75% of the course time is hands-on exercises.

Duration: 2 Days
Participant Quota: 4-6 People
Location: ABB Training Center Istanbul/Izmir Turkey

Operator
Training Agenda
OMNICORE OP

Day 1

AM	-	Health & Safety
	-	Introduction to OmniCore Controller and ABB robots
	-	Introduction to Flexpendant
	-	Jogging (Moving the robot with the joystick)
	-	Practical exercises

PM	-	Basic Move Instructions
	-	Modify robot positions
	-	Practical exercises

Day 2

AM	-	Program structure (Instructions, Routines and Modules)
	-	Revolution counters calibration
	-	I/O Instructions
	-	Most Common Offs - Reltool functions
	-	Practical exercises

PM	-	Saving data (Program, Backup, Diagnostics)
	-	Restart Types
	-	Motion Supervision
	-	Event Logs
	-	Practical exercises
	-	Training assessment – Q&A - Exam

Click to here to the main page.
Click to here to contact us.