

ABB LEVEL 1-2

OPERATIONS, PROGRAMMING, AND TROUBLESHOOTING

COURSE DESCRIPTION

This course uses in-depth, hands-on exercises to teach students the skills necessary for basic robot operation, programming, root cause system troubleshooting, recovery, and efficient teach pendant navigation. Core robotic concepts covered include coordinate systems, tool center point verification, routine selection, use of the program pointer and cursor, and understanding program flow. Basic techniques for improving and validating cycle time are also addressed.

Students will learn robot communication methods, input and output types, and program instructions critical for operation and troubleshooting. Robot calibration verification, rev counter updates, and motor/arm calibration methods are covered. File utilities and backup and restore functions are also included. Root cause troubleshooting methods to minimize positional and program changes are covered to eliminate unnecessary downtime. Hot edits for making minor adjustments to positions while in automatic mode are also addressed. This course covers ABB IRC5 robots; ABB S4 information can be provided upon request.

TOPICS COVERED

- Safety
- Systems Components
- Control Panel and Status Indicators
- FlexPendant Navigation
- Coordinate Systems
- Efficient Jog Methods
- Fault Recovery and Event Log
- Routine Selection and Cycling
- Program Pointer and Cursor
- Basic and Offset Motion Instructions
- Commonly Used Program Instructions
- Application-Specific Commands
- System Troubleshooting
- Data Types and Uses
- Routines vs. Modules
- Modifying Positions
- TCP Adjust vs. Position Modification
- Basic Program Editing and Hot Edits
- Most Common I/O Screen Setup
- Troubleshooting and Locating I/O
- Auto-Mode Preparation and Recovery
- Tool Center Point Setup/Verify
- Rev Counter Updates and Calibration
- Backup and Restore Utilities

2026 ABB CLASS SCHEDULE

Start Date	End Date	Location	Seats Open	Course	Duration	Language
8-03	8-07	Michigan, USA	8	ABB Level 1	5 Days	English
10-12	10-16	Michigan, USA	8	ABB Level 2	5 Days	English

Course applies to: IRC5 robot controllers.

CONTACT US HERE TO RESERVE YOUR SPOT