

## Course contents ABB-IRC5

	Introduction	Definitions	Safety	Motion Basic	Motion Advanced	TeachPendant	Inputs and Outputs	Programming Basic	Robotstudio online	Programming Structure	Configuration	Data
Operator	x	x	x	x		x	x					
Programmer	x	x	x	x		x	x	x				x
Programmer Advanced	x	x	x	x	x	x	x	x	x	x		x
Integrator	x	x	x	x	x	x	x	x	x	x	x	x



Introduction	<p><b>Insight versus knowledge</b> Get to know what your equipment does together with insight into how it achieves its goals</p>
Definitions	<p><b>In this modules the definition used in the course are explained</b> dictionary with explanation of the terms used throughout the course</p>
Safety	<p><b>Safety according NEN-EN-ISO 10218-1/2</b> Brake release, different stop categories, SafeMove instructions, various components to ensure equipment and human safety</p>
Motion Basic	<p><b>Basic understanding of robot motion</b> Coordinate system, manual positioning and jogging, hardware; axes, encoders</p>
Motion Advanced	<p><b>Advanced knowledge how to program robot motion</b> Discusses the different coordinate systems; World, Base, Tool, Workobject, the kinematic model and coordinated motion control</p>
TeachPendant	<p><b>The HMI of the robot</b> Shows and explains available options on the teachpendant like calibration, program editor and event logs</p>
Inputs and Outputs	<p><b>Communicate with other devices / process equipment</b> Connect the robot to hardware and other slave or master devices</p>
Programming Basic	<p><b>Being able to control the robot program</b> Teaches about different instructions, how to read and debug a robot program and to write one yourself</p>
Robotstudio online	<p><b>Using Robotstudio to connect to a Robot Controller</b> Teaches about the use of ABB RobotStudio in which the robot software can be programmed and simulated</p>
Programming Structure	<p><b>Understanding how the programming works</b> Discusses structured programming and different levels in your software; Tasks, Programs and Routines</p>
Programming Advanced	<p><b>Advanced programming with structured logic and advanced motion control</b> Discussing array based computing, multitasking and ABB powerpacks</p>
Configuration	<p><b>Setting up the robot</b> Various configuration files and SafeMove</p>
Data	<p><b>The most common used data</b> Discussing various available basic datatypes and motion datatypes</p>
Optional	<p><i>Service mechanic, Offline Programming with robotstudio, Force Control option, Advanced communication</i></p>