Compact Basics

Learn how to setup, configure, and program **Allen-Bradley CompactLogix** Small Programmable Automation Controller in Compact Basics

Level 1 Course Lessons:

(Included with Standard and Extended courses)

Hardware
- Finding and Using Product Manuals
- Overview of Five Generation of Hardware
- CompactLogix Controller Architecture, OS
- Selecting System Components, Using IAB
- 1769, 1734, 5069 I/O Setup, Forcing

Software
- History, Packages and Versions
- RSLogix and Studio 5000 First Look
- RSLinx Driver Setup and using BOOTP
- ControlFlash and Firmware Files

Communications
- Ethernet - Multicast vs Unicast
- Distributed Ethernet I/O
- Testing and Troubleshooting I/O
- How to setup RSLinx Classic Drivers
- Flashing Controller and Module Firmware

Programming
- Controller Properties
- Tasks, Programs, Routines, Tags
- Controller and Program Tags
- Logix Ladder Logic Diagram Routines (LD)
- Creating a Motor Control Ladder Routine
- Using Photo Eyes for Part Sensing (LD)
- Track Production with Timers and Counters
- How to Code Building to a Preset
- Controller Time and using the GSV
- Creating and Using Trends
- How to Code Jogs & Single Cycles
- Migrating Projects to the 5380

Level 2 Course Lessons:

(Included with Level 2 course only)

Advanced Programming
- How Function Block (FBD) Routines work
- Machine Maintenance Routine (FBD)
- Material Sensing Routine (FBD)
- Machine Alarm Routine (FBD)
- Feed and Eject Routine (FBD)
- How Structured Text (ST) Routines work

Planned "Future" Lessons
- Structured Text Routines
- User Defined Data Types (UDT)
- Sequential Function Charts (SFC)
- Add-on Instructions (AOI)
- PlantPAx Process Objects
- Produced and Consumed Tags
- Messaging Controllers
- PowerFlex VFD Integration
- Using FBD for VFD Motor Control
- PanelView Plus Motor Control Screen
- PanelView 5000 Motor Control Screen

Our CompactLogix Level 1 Course (Compact Basics) is designed for those students who are already familiar with PLCs, and would like to learn how to setup, program, and troubleshoot the CompactLogix using RSLogix 5000 and Studio 5000

What students will learn in the Level 1 Course:

- Understanding the design and different models of CompactLogix Controllers
- The difference between RSLogix 5000 and Studio 5000
- How to size a system, choose components, and configure Controllers, I/O, and Comms
- How to setup Ethernet, Serial DF1, and USB drivers in RSLinx Classic
- How to setup, configure, and edit RSLogix/Studio 5000 projects
- How to add, edit, and test Local I/O, and Distributed Ethernet I/O
- Understanding Controller and Program tags, and how to create and edit Tags and Aliases
- How to setup, configure and edit Tasks, Programs, and Routines
- How to create and troubleshoot Motor Control Ladder Routines
- How to create and troubleshoot Part Sensing Routines
- How to use Timers and Counters to Track Production
- How to create and troubleshoot code to Build to a Preset Number of Parts
- Controller Time and using the GSV Instruction, Creating and Using Trends
- Considerations when Migrating Projects to the 5380

What students need to complete the optional hands-on exercises:

- Windows 10 PC, preferably with an Ethernet or USB Port and cables (Serial Comms are covered)
- An Allen-Bradley CompactLogix Controller (may also require a power supply & end cap)
- A copy of RSLogix/Studio 5000 of a version that supports the above CompactLogix Controller

Note: There are no free editions of the programming software, but demo editions are available from Rockwell

Course Editions (Note: Online courses include instructor support, completion certificate, and lifetime access)

- **Compact Basics Level 1 Online Course** (complete)   **$99**
- **Compact Basics Level 2 Online Course** (not currently available as a standalone course)   **$99**
- **Compact Basics Level 1 & 2 Online Course Bundle** (Level 2 currently under development) **$149**

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The Automation School's Group Enrollment Program

The Automation School offers group enrollment to our business customers who need to enroll multiple employees in one or more of our courses.

Employers who utilize group enrollment gain access to several benefits, including group discounts based on the number of students being enrolled.

Our group enrollment program also provides employers with the ability to track student progress using a complimentary "group progress" webpage accessible to designated "group leaders."

This webpage not only allows the tracking of student progress, but also provides individual quiz scores and overall completion status. Access to this level of detail has been especially helpful to employers who incentivize their employees to successfully complete the courses they're enrolled in.

And just like with standard enrollees, students enrolled through the group enrollment process will have access to their courses *for as long as they are employed by the company who enrolled them,* as none of our courses come with any artificial deadlines or expiration dates.

So, if you're considering enrolling three or more employees in courses at The Automation School, I invite you to reach out to us for a free group enrollment quote.

Sincerely,

Shawn Tierney,
Instructor and Founder, The Automation School

Common "Group Enrollment" Questions

"What do I need to provide you with in order to enroll a group of employees in online courses at The Automation School?"

First, in order for us to provide you with a group enrollment quote, we'll need to know how many students you want to enroll (minimum of three,) and which courses you wish to enroll them in. This information can be submitted to us using our Group Enrollment Inquiry Form **HERE**.

Then when you place your group enrollment order, you'll need to provide us with the name of each student as well as their company email address. If you wish to make use of the student tracking webpage, we'll also need at least one group manager's name and email address as well.

"After enrolling a group of employees, if one of them leaves my department or our company can I pass that seat onto to a replacement?"

Yes! As long as the original enrollee has not completed more than 25% of the course, we can pass the former enrollee's seat on to a new employee *totally free of charge!* If the original student has completed more than 25% of the course, thier seat can be re-allocated at a pro-rated cost *(i.e. if the previous student completed 50% of the course, reallocating their seat would cost 50% of a new seat)*

"How can I find out more about enrolling a group of my employees in online courses at The Automation School?"

To get in contact with us about group enrollment, just fill out our short Group Enrollment Inquiry form **HERE,** and we'll typically get in touch with you within one business day!