



ENGINEERING AND TECHNICAL TRAINING

PLC, SCADA and DCS Systems for Industrial Automation

3 day course

Classroom, online or in-house

Course overview

A three day programme covering the three layers of control a modern plant runs on and how they fit together. Delegates work through programmable logic controller hardware architecture and programming, writing ladder logic and function block programs for common platforms, then move up to configuring SCADA screens, alarms and historian trends for plant monitoring. Distributed control system architecture is covered in its own right, including where it is the correct choice for continuous process control and where a programmable controller is enough. The industrial communication protocols tying the layers together are treated practically, since most integration problems are network problems. The course closes on systematic fault finding across all three layers, which is the skill that determines how long a stopped plant stays stopped.

What you will learn

- Develop ladder logic and function block programmes for common PLC platforms
- Configure SCADA screens, alarms and historian trends for plant monitoring
- Describe DCS architecture and its application in continuous process control
- Apply industrial communication protocols used in automation networks
- Troubleshoot common automation system faults across PLC, SCADA and DCS layers
- Apply control system cyber security measures to an operational network
- Manage backups, version control and change on live control systems

Who should attend

- Automation engineers
- Control systems engineers
- Instrumentation engineers
- SCADA administrators
- Plant electrical and control technicians

Course outline

- 01 PLC hardware architecture and programming fundamentals
- 02 Ladder logic and function block programming
- 03 SCADA system configuration, alarms and trending
- 04 DCS architecture and continuous process control
- 05 Industrial communication protocols and networks
- 06 Control system cyber security
- 07 Backups, version control and change management
- 08 Automation system troubleshooting and fault finding

Upcoming dates

Dates	Venue	Format	Fee per delegate
12 to 14 October 2026	Kigali, Rwanda	Classroom	USD 995
30 December 2026 to 1 January 2027	Lusaka, Zambia	Classroom	USD 995
13 to 15 January 2027	Durban, South Africa	Classroom	R14,950
27 to 29 January 2027	Online	Online	R6,500



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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