



Measurement Technologies and Process Automation

DURATION

5 days

CONTACT HOURS

30

LEVEL

Intermediate

FEE PER DELEGATE

R15,000

Instrumentation and control in a cement plant, from the sensor in the duct to the optimiser above the DCS.

A control system is only as good as what it is measuring, and cement measurement is difficult: hot, dusty, abrasive and corrosive. This week starts with the instruments, what each measures, how it fails and what maintenance it needs, then builds up through control loops and their tuning to the supervisory and expert control layers. Online analysis gets its own session because it changes how a plant is controlled when it works and misleads badly when it drifts.

Available as classroom, live online, in house.

Who it is for

Instrumentation and control engineers and technicians, process engineers working with control systems, automation project engineers, and production staff who rely on the readings.

What you will be able to do

- Select instruments suited to cement plant conditions.
- Recognise instrument failure and drift from the process data.
- Tune a control loop and know when tuning is not the problem.
- Evaluate supervisory and expert control systems.
- Use online analysis correctly, including its calibration burden.

The outline

DAY 1

Instruments

Temperature, pressure and flow in hot dusty service · Level, weight and belt weighers · Gas analysis and its sampling problems

DAY 2

Reliability

Failure modes and drift · Calibration routines · Recognising a bad reading from the process

DAY 3

Control

Loop structure and tuning · Cascade, ratio and feedforward · Interlocks and safety functions

DAY 4

Above the loops

Supervisory and model based control · Expert systems for kiln and mill · What these systems need to succeed

DAY 5

Online analysis

Cross belt analysers · Calibration and validation burden · Using analyser data in control

What you leave with

- An instrumentation review for one section.
- A loop tuning exercise on a real loop.
- A control system improvement proposal.

Published dates

DATES	WHERE	FEE
23 to 27 November 2026	Cape Town, South Africa	R15,000
30 November 2026 to 4 December 2026	Nairobi, Kenya	US\$1,500
7 to 11 December 2026	Dar es Salaam, Tanzania	US\$1,500
14 to 18 December 2026	Live online	US\$995

Fees are per delegate and cover all course materials. Registration is arranged by the delegate. Reg

Register or ask a question

globalaxistraining.co.za/courses/measurement-technologies-and-process-automation
info@globalaxistraining.co.za
+27 72 337 9234

250 Beyers Naude Drive, Rustenburg, North West, 2999, South Africa

This copy was produced on 30 October 2026.