



POWER AND ELECTRICAL TRAINING

Power Quality and Reliability

5 day course

Classroom, online or in-house

Course overview

Power quality problems damage equipment and stop production without ever appearing as an outage, which is why they are often diagnosed late and blamed on the wrong thing. This course covers measuring and fixing them. Delegates work through the disturbance types and their signatures, harmonics and their sources in modern nonlinear loads, voltage dips and their effect on sensitive equipment, flicker, unbalance and transients. Measurement and survey technique is taught practically, including where to place instruments and how long to record. Mitigation covers filtering, conditioning and ride through, and the course closes on reliability indices, outage analysis and building the case for an investment in quality.

What you will learn

- Identify power quality disturbance types from their signatures
- Analyse harmonics and trace them to their sources
- Assess voltage dips and their effect on sensitive equipment
- Evaluate flicker, unbalance and transient disturbances
- Plan and conduct a power quality survey that captures the problem
- Select mitigation including filtering, conditioning and ride through
- Use reliability indices and outage analysis to justify investment

Who should attend

- Electrical engineers in industry and utilities
- Plant and facilities engineers
- Maintenance and reliability staff
- Consultants investigating equipment damage
- Regulators and network planners

Course outline

- 01 Disturbance types and their signatures
- 02 Harmonics, sources and effects
- 03 Voltage dips and equipment sensitivity
- 04 Flicker, unbalance and transients
- 05 Survey planning, instrument placement and recording
- 06 Diagnosing a problem from recorded data
- 07 Mitigation: filtering, conditioning and ride through
- 08 Reliability indices, outage analysis and the investment case

Upcoming dates

Dates	Venue	Format	Fee per delegate
16 to 20 November 2026	Cape Town, South Africa	Classroom	R19,950
7 to 11 December 2026	Pretoria, South Africa	Classroom	R19,950
28 December 2026 to 1 January 2027	Dar es Salaam, Tanzania	Classroom	USD 1,325
11 to 15 January 2027	Durban, South Africa	Classroom	R19,950



Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 1,325** 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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