



POWER AND ELECTRICAL TRAINING

Uninterruptible Power Supplies and Battery Systems

3 day course

Classroom, online or in-house

Course overview

Standby power is the system nobody tests until they need it, and a battery that has quietly failed is indistinguishable from one that works until the supply goes. This course covers making that system dependable. Delegates work through uninterruptible supply topologies and the protection each actually provides, battery chemistries and their ageing behaviour, sizing for a defined load and autonomy, and the charging and thermal management that determine service life. Testing and monitoring cover impedance measurement, capacity discharge testing and the interpretation of both. The course closes on maintenance regimes, failure modes and replacement planning, with attention to the heavy duty cycles imposed by frequent grid interruption across the region.

What you will learn

- Compare uninterruptible supply topologies and the protection each provides
- Select battery chemistry against duty, environment and service life
- Size a system for a defined load and autonomy
- Specify charging and thermal management correctly
- Carry out and interpret impedance and capacity discharge testing
- Build a maintenance and monitoring regime that finds a failing battery
- Plan replacement against heavy cycling from frequent grid interruption

Who should attend

- Electrical and facilities engineers
- Data centre and critical facility staff
- Substation and control system engineers
- Maintenance technicians
- Asset managers responsible for standby power

Course outline

- 01 Uninterruptible supply topologies and what each protects against
- 02 Battery chemistries and ageing behaviour
- 03 Sizing for load and autonomy
- 04 Charging regimes and thermal management
- 05 Impedance measurement and interpretation
- 06 Capacity discharge testing
- 07 Monitoring and finding a failing battery before it matters
- 08 Failure modes, maintenance and replacement planning

Upcoming dates

Dates	Venue	Format	Fee per delegate
21 to 23 September 2026	Gaborone, Botswana	Classroom	R14,950
4 to 6 November 2026	Pretoria, South Africa	Classroom	R14,950
8 to 10 March 2027	Lagos, Nigeria	Classroom	USD 995
15 to 17 March 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@afri-science.co.za, or WhatsApp us on **+27 63 479 1136**.

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