



POWER AND ELECTRICAL TRAINING

Safe Operation and Maintenance of Circuit Breakers and Switchgear

5 day course

Classroom, online or in-house

Course overview

Switching operations and switchgear maintenance carry the most serious electrical risk in most plants, and arc flash incidents remain a leading cause of severe injury. This course covers both the technical and the safety discipline. Delegates work through circuit breaker types and interrupting technology, switchgear construction and arc containment, switching principles and safe sequences, isolation, locking and earthing, and the maintenance and testing regime that keeps switchgear operable. Arc flash risk is treated properly: hazard assessment, incident energy, protective equipment and the working practices that reduce exposure. The course is explicit that it supports, and does not replace, an employer's own safety rules and authorisation regime.

What you will learn

- Describe circuit breaker types and interrupting technologies
- Explain switchgear construction, arc containment and internal arc classification
- Apply safe switching principles and construct a switching sequence
- Carry out isolation, locking and earthing to a defensible standard
- Assess arc flash hazard and select protective equipment accordingly
- Plan and interpret switchgear maintenance and testing
- Recognise the limits of training against site authorisation requirements

Who should attend

- Electrical engineers and technicians
- Switching and substation operations personnel
- Maintenance staff working on switchgear
- Electrical safety and authorising officers
- Technical supervisors responsible for switching

Course outline

- 01 Circuit breaker types and interrupting technology
- 02 Switchgear construction, arc containment and internal arc classification
- 03 Switching principles and constructing a safe sequence
- 04 Isolation, locking, tagging and earthing
- 05 Arc flash: hazard assessment and incident energy
- 06 Protective equipment selection and working practice
- 07 Maintenance regimes and condition assessment
- 08 Testing, verification and return to service

Upcoming dates

Dates	Venue	Format	Fee per delegate
5 to 9 October 2026	Dar es Salaam, Tanzania	Classroom	USD 1,325
9 to 13 November 2026	Online	Online	R8,500
1 to 5 February 2027	Harare, Zimbabwe	Classroom	USD 1,325
15 to 19 February 2027	Port Louis, Mauritius	Classroom	USD 1,325



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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