



POWER AND ELECTRICAL TRAINING

Industrial Electrical Systems Design and Safety

3 day course

Classroom, online or in-house

Course overview

A three day course on designing industrial electrical installations that are safe to build, operate and work on. Delegates work through industrial design standards and practice, cable sizing, containment and installation methods, and hazardous area classification and the equipment selection that follows from it. Arc flash receives detailed treatment, covering hazard analysis, incident energy and the selection of protective equipment, because arc flash remains a leading cause of severe electrical injury and the assessments are frequently either missing or out of date. Lockout tagout and electrical permit to work systems are covered as the controls that make the design safe in practice, and the course closes on electrical safety audits and incident investigation.

What you will learn

- Apply industrial electrical design standards to power distribution layouts
- Conduct arc flash hazard analysis and specify appropriate personal protective equipment
- Design cable sizing, containment and installation for industrial environments
- Apply lockout tagout and electrical permit to work systems
- Evaluate hazardous area classification requirements for electrical equipment
- Assess shock protection, earthing and touch voltage in an installation
- Verify an installation through inspection and testing before energisation

Who should attend

- Electrical design engineers
- Electrical safety officers
- Plant electricians
- Project engineers
- HSE coordinators overseeing electrical work

Course outline

- 01 Industrial electrical design standards and practice
- 02 Cable sizing, containment and installation methods
- 03 Earthing, shock protection and touch voltage
- 04 Arc flash hazard analysis and protective equipment selection
- 05 Hazardous area classification and equipment selection
- 06 Lockout tagout and electrical permit to work systems
- 07 Inspection and testing before energisation
- 08 Electrical safety audits and incident investigation

Upcoming dates

Dates	Venue	Format	Fee per delegate
9 to 11 December 2026	Casablanca, Morocco	Classroom	USD 995
18 to 20 January 2027	Kampala, Uganda	Classroom	USD 995
8 to 10 February 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**.

AfriScience Group | +27 61 536 6531 | info@afriScience.co.za | Pretoria, Gauteng, South Africa