



POWER AND ELECTRICAL TRAINING

Diesel Generator Operation and Maintenance

3 day course

Classroom, online or in-house

Course overview

Across much of the region a diesel generating set is not standby plant but a primary supply running for many hours a day, on a duty cycle its maintenance schedule was never written for. This course covers operating and maintaining one accordingly. Delegates work through engine and alternator fundamentals, sizing against a real load profile including step loading and starting current, and the fuel, lubrication, cooling and exhaust systems that account for most failures. Control, protection, synchronising and load sharing are covered for multiple set installations. The course closes on maintenance intervals adjusted for actual duty, fuel quality and storage problems, and the load bank testing that proves a set will carry what it is meant to.

What you will learn

- Explain engine and alternator fundamentals for a generating set
- Size a set against a real load profile including step load and starting current
- Maintain fuel, lubrication, cooling and exhaust systems
- Configure control, protection, synchronising and load sharing
- Adjust maintenance intervals for actual duty rather than standby assumptions
- Manage fuel quality, storage and contamination
- Prove capability through load bank testing

Who should attend

- Facilities, plant and electrical engineers
- Maintenance technicians and generator operators
- Site and building services managers
- Independent power and rental power staff
- Anyone responsible for standby or prime power supply

Course outline

- 01 Engine and alternator fundamentals
- 02 Sizing against a real load profile
- 03 Step loading and starting current
- 04 Fuel systems, quality, storage and contamination
- 05 Lubrication, cooling and exhaust systems
- 06 Control, protection and instrumentation
- 07 Synchronising and load sharing across multiple sets
- 08 Maintenance intervals for real duty, and load bank testing

Upcoming dates

Dates	Venue	Format	Fee per delegate
5 to 7 October 2026	Lagos, Nigeria	Classroom	USD 995
14 to 16 October 2026	Online	Online	R6,500
21 to 23 October 2026	Gaborone, Botswana	Classroom	R14,950
2 to 4 December 2026	Cape Town, South Africa	Classroom	R14,950



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