



ENGINEERING AND TECHNICAL TRAINING

Reliability Engineering and Life Data Analysis

5 day course

Classroom, online or in-house

Course overview

Reliability decisions are commonly made on an average life figure that describes almost nothing about when equipment actually fails, and replacing a component at its mean life either wastes most of its useful service or misses the early failures entirely. This course covers the statistics that answer the question properly. Delegates work through failure distributions and what each implies about the underlying mechanism, life data analysis including censored data where most units have not yet failed, and Weibull analysis with the shape parameter that distinguishes infant mortality, random failure and wear out. Reliability block diagrams and system reliability follow. Optimum replacement interval is calculated. The course closes on accelerated testing, on availability modelling and on the data quality this all depends on.

What you will learn

- Select failure distributions and interpret what each implies
- Analyse life data including censored observations
- Apply Weibull analysis and interpret the shape parameter
- Distinguish infant mortality, random failure and wear out
- Build reliability block diagrams and calculate system reliability
- Determine an optimum replacement interval
- Model availability and assess whether your data supports any of it

Who should attend

- Reliability and maintenance engineers
- Asset managers and analysts
- Quality and process engineers
- Maintenance planners using failure data
- Engineers specifying equipment life requirements

Course outline

- 01 An average that describes nothing
- 02 Failure distributions and their meaning
- 03 Life data and censored observations
- 04 Weibull analysis and the shape parameter
- 05 Infant mortality, random failure and wear out
- 06 Reliability block diagrams
- 07 Optimum replacement interval
- 08 Accelerated testing, availability and data quality

Upcoming dates

Dates	Venue	Format	Fee per delegate
28 September to 2 October 2026	Durban, South Africa	Classroom	R19,950
26 to 30 October 2026	Online	Online	R8,500
14 to 18 December 2026	Lagos, Nigeria	Classroom	USD 1,325
25 to 29 January 2027	Cape Town, 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**.

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