



ENGINEERING AND TECHNICAL TRAINING

Quality Engineering and Process Improvement

5 day course

Classroom, online or in-house

Course overview

This course applies statistical method to the control and improvement of a production process. Delegates work through measurement system analysis, because a process cannot be improved through an unreliable gauge, then statistical process control, capability analysis, designed experiments and the structured problem solving methods used to eliminate a recurring defect. The material is taught on real production data, and delegates carry a capability study and an improvement project through the course. Emphasis is placed on the distinction between common and special cause variation, which is the point at which most process improvement effort is either well spent or wasted.

What you will learn

- Assess a measurement system before drawing conclusions from its data
- Apply statistical process control and interpret control charts correctly
- Distinguish common cause from special cause variation and respond appropriately
- Carry out a process capability study and interpret the indices
- Design and analyse a simple experiment to identify significant factors
- Apply structured problem solving to eliminate a recurring defect
- Sustain an improvement through standardisation and monitoring

Who should attend

- Quality engineers and quality managers
- Production and process engineers
- Manufacturing supervisors and team leaders
- Continuous improvement practitioners
- Laboratory and inspection staff

Course outline

- 01 Variation, and why it is the subject of quality engineering
- 02 Measurement system analysis and gauge capability
- 03 Statistical process control and control chart selection
- 04 Common cause against special cause, and the cost of confusing them
- 05 Process capability studies and index interpretation
- 06 Designed experiments for identifying significant factors
- 07 Structured problem solving for recurring defects
- 08 Standardising and monitoring to hold the gain

Upcoming dates

Dates	Venue	Format	Fee per delegate
12 to 16 September 2026	Pretoria, South Africa	Classroom	R11,995
29 September to 3 October 2026	Victoria, Seychelles	Classroom	R11,995
25 to 29 October 2026	Kigali, Rwanda	Classroom	R11,995
6 to 10 December 2026	Maputo, Mozambique	Classroom	R11,995



Fees and how to register

Online **from R6,500** per delegate, classroom **from R11,995** per delegate, 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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