



ENGINEERING AND TECHNICAL TRAINING

Machining and Workshop Practice

5 day course

Classroom, online or in-house

Course overview

A maintenance workshop that can make a part keeps a plant running when the supply chain cannot, and the difference between a usable part and scrap is measurement, setup and knowing what the machine can hold. This course covers the trade. Delegates work through measurement and metrology, including the instruments and the technique that makes a reading trustworthy, and material selection and machinability. Turning, milling, drilling and grinding operations are covered with workholding, tooling and cutting parameter selection. Fits, tolerances and surface finish are addressed against what the application requires. Reverse engineering an unavailable part follows. The course closes on workshop safety, machine maintenance and on deciding when to make a part rather than wait for one.

What you will learn

- Measure accurately and know when a reading is trustworthy
- Select material and account for machinability
- Set up and perform turning, milling, drilling and grinding operations
- Select workholding, tooling and cutting parameters
- Achieve required fits, tolerances and surface finish
- Reverse engineer a part that cannot be sourced
- Maintain machines and work safely in a workshop

Who should attend

- Machinists, fitters and workshop technicians
- Maintenance artisans and apprentices
- Workshop supervisors and foremen
- Engineers specifying machined components
- Stores staff assessing whether a part can be made

Course outline

- 01 Making a part when the supply chain cannot
- 02 Measurement and metrology
- 03 Material selection and machinability
- 04 Turning operations
- 05 Milling, drilling and grinding
- 06 Workholding, tooling and cutting parameters
- 07 Fits, tolerances and surface finish
- 08 Reverse engineering, machine maintenance and workshop safety

Upcoming dates

Dates	Venue	Format	Fee per delegate
21 to 25 September 2026	Online	Online	R8,500
5 to 9 October 2026	Port Louis, Mauritius	Classroom	USD 1,325
26 to 30 October 2026	Windhoek, Namibia	Classroom	R19,950
16 to 20 November 2026	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**.

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