



MINING AND MINERALS TRAINING

Mineral Processing and Metallurgical Plant Operations

5 day course

Classroom, online or in-house

Course overview

A processing plant decides how much of the metal in the ore actually reaches a saleable product, and a point of recovery is usually worth more than any cost saving available elsewhere on site. This course covers running one. Delegates work through comminution from crushing through milling and the energy it consumes, classification and screening, and the separation processes including gravity, flotation, leaching and magnetic separation. Dewatering, thickening and tailings handling complete the flowsheet. Metallurgical accounting and mass balancing are taught properly, since recovery cannot be improved if it cannot be measured, and the course closes on plant optimisation and troubleshooting a drop in recovery.

What you will learn

- Describe a processing flowsheet from run of mine ore to final product
- Assess comminution performance and the energy it consumes
- Explain classification, screening and their effect on downstream recovery
- Compare gravity, flotation, leaching and magnetic separation
- Operate dewatering, thickening and tailings handling
- Construct a mass balance and carry out metallurgical accounting
- Troubleshoot a drop in recovery systematically

Who should attend

- Metallurgists and process engineers
- Plant operators and shift supervisors
- Mining engineers working with processing teams
- Laboratory staff supporting metallurgical accounting
- Graduate engineers entering a plant role

Course outline

- 01 The flowsheet from run of mine ore to product
- 02 Crushing, milling and comminution energy
- 03 Classification and screening
- 04 Gravity separation
- 05 Flotation
- 06 Leaching and hydrometallurgy
- 07 Dewatering, thickening and tailings handling
- 08 Mass balancing and metallurgical accounting
- 09 Optimisation and troubleshooting lost recovery

Upcoming dates

Dates	Venue	Format	Fee per delegate
30 September to 4 October 2026	Lagos, Nigeria	Classroom	R11,995
9 to 13 October 2026	Johannesburg, South Africa	Classroom	R11,995
25 to 29 October 2026	Victoria Falls, Zimbabwe	Classroom	R11,995
3 to 7 November 2026	Nairobi, Kenya	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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