



MINING AND MINERALS TRAINING

Grade Control and Ore Reserve Estimation

5 day course

Classroom, online or in-house

Course overview

Grade control decides what gets sent to the plant and what gets sent to waste, and an error in either direction is money lost that never appears as a line item. This course covers the discipline. Delegates work through sampling theory and the errors that arise before any analysis happens, drilling and sampling practice for grade control, and quality assurance and quality control including standards, blanks and duplicates. Estimation covers geostatistics, variography and kriging alongside the simpler methods, and the classification of resources and reserves against the reporting codes. The course closes on reconciliation between the resource model, the grade control model and what the plant actually received.

What you will learn

- Apply sampling theory and identify the errors introduced before analysis
- Design grade control drilling and sampling for a deposit
- Operate quality assurance and control with standards, blanks and duplicates
- Apply variography and kriging alongside simpler estimation methods
- Classify resources and reserves against the reporting codes
- Define ore and waste boundaries for mining
- Reconcile the resource model, the grade control model and plant receipts

Who should attend

- Mine and exploration geologists
- Grade control officers and technicians
- Resource estimation and technical services staff
- Metallurgists working with head grade data
- Mining engineers using resource models

Course outline

- 01 Sampling theory and the errors before analysis
- 02 Grade control drilling and sampling practice
- 03 Quality assurance and quality control programmes
- 04 Assay laboratory interface and turnaround
- 05 Variography and spatial continuity
- 06 Kriging and alternative estimation methods
- 07 Resource and reserve classification under the reporting codes
- 08 Ore and waste definition, and reconciliation

Upcoming dates

Dates	Venue	Format	Fee per delegate
28 December 2026 to 1 January 2027	Johannesburg, South Africa	Classroom	R19,950
8 to 12 February 2027	Durban, South Africa	Classroom	R19,950
22 to 26 February 2027	Online	Online	R8,500
22 to 26 March 2027	Pretoria, 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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