



MINING AND MINERALS TRAINING

Mine Ventilation and Environmental Control

5 day course

Classroom, online or in-house

Course overview

Underground ventilation delivers breathable air, removes contaminants and controls heat, and it is frequently the single largest consumer of power on an underground mine. This course covers designing and operating it. Delegates work through airflow fundamentals and network analysis, fan selection and duty, and the control of dust, diesel particulate, gases and radiation. Heat and humidity receive detailed treatment, since refrigeration becomes a dominant cost as depth increases across the region's deeper mines. Ventilation on demand and energy optimisation are covered alongside survey and measurement technique, and the course closes on emergency ventilation, refuge chambers and escape planning.

What you will learn

- Apply airflow fundamentals and carry out ventilation network analysis
- Select fans against duty and assess system resistance
- Control dust, diesel particulate, gases and radiation
- Manage heat and humidity, including refrigeration where required
- Conduct ventilation surveys and interpret the measurements
- Apply ventilation on demand and reduce energy consumption
- Plan emergency ventilation, refuge and escape

Who should attend

- Ventilation officers and engineers
- Underground mining engineers
- Occupational hygienists in mining
- Health and safety practitioners underground
- Mine managers and technical services staff

Course outline

- 01 Airflow fundamentals and resistance
- 02 Ventilation network analysis
- 03 Fan selection and duty
- 04 Dust, diesel particulate and gas control
- 05 Heat, humidity and refrigeration
- 06 Ventilation surveys and measurement
- 07 Ventilation on demand and energy optimisation
- 08 Emergency ventilation, refuge chambers and escape

Upcoming dates

Dates	Venue	Format	Fee per delegate
21 to 25 September 2026	Durban, South Africa	Classroom	R19,950
12 to 16 October 2026	Johannesburg, South Africa	Classroom	R19,950
7 to 11 December 2026	Pretoria, South Africa	Classroom	R19,950
25 to 29 January 2027	Port Louis, Mauritius	Classroom	USD 1,325



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@afiscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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