



MANUFACTURING AND PRODUCTION

Cleanroom Design, Classification and Environmental Monitoring

3 day course

Classroom, online or in-house

Course overview

A cleanroom is a controlled environment only while it is being operated correctly, and most excursions trace to movement, gowning or a pressure cascade that reversed rather than to the room itself. This course covers both the engineering and the behaviour. Delegates work through classification, the particle limits at each grade and the difference between at rest and in operation states. Airflow design follows, including unidirectional and turbulent flow, air change rates, filtration and the recovery testing that proves a room can clean itself. Pressure cascades and airlocks are addressed, including the direction of flow between grades. Gowning and personnel flow are covered, since operators are the largest particle source in any room. Material transfer and disinfection follow. Environmental monitoring is treated in detail: viable and non viable sampling, site selection, frequency, alert and action limits and trend review. Disinfectant rotation and efficacy are covered. The course closes on requalification, on excursion investigation and on inspection expectations.

What you will learn

- Apply particle limits by grade in at rest and in operation states
- Design unidirectional and turbulent airflow with appropriate air changes
- Verify recovery and filter integrity
- Maintain pressure cascades and airlock direction
- Control personnel and material flow, gowning and disinfection
- Design environmental monitoring with justified sites and frequencies
- Rotate disinfectants, requalify rooms and investigate excursions

Who should attend

- Cleanroom operators and supervisors
- Quality assurance and microbiology staff
- Facilities and heating and ventilation engineers
- Validation specialists requalifying cleanrooms
- Managers responsible for controlled environments

Course outline

- 01 Controlled only while operated correctly
- 02 Classification and particle limits
- 03 At rest against in operation states
- 04 Airflow, air changes and filtration
- 05 Recovery testing and filter integrity
- 06 Pressure cascades and airlocks
- 07 Gowning, personnel and material flow
- 08 Monitoring, disinfection, requalification and excursions

Upcoming dates



Dates	Venue	Format	Fee per delegate
4 to 6 November 2026	Lusaka, Zambia	Classroom	USD 995
13 to 15 January 2027	Addis Ababa, Ethiopia	Classroom	USD 995
15 to 17 February 2027	Online	Online	R6,500
1 to 3 March 2027	Durban, South Africa	Classroom	R14,950

Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** 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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