

**MANUFACTURING AND PRODUCTION**

Lime and Gypsum Products Manufacturing

3 day course

Classroom, online or in-house

Course overview

Lime and gypsum are both made by driving water or carbon dioxide out of a mineral with heat, and both are ruined by the same thing, taking the calcination too far or not far enough. This course covers controlling that. Delegates work through limestone quality, calcination chemistry and the kiln types used, with reactivity as the property that determines what quicklime is good for. Slaking is covered including hydrator operation, heat of reaction and the fineness and stability of the resulting hydrate. Lime applications across construction, water treatment and metallurgy are addressed so producers understand what each customer needs. Gypsum follows: rock quality, calcination to hemihydrate, and the difference between stucco grades. Plaster and plasterboard manufacture are covered, including board line operation, paper bonding, setting control and drying. Additives and retarders are addressed. Testing follows for reactivity, available lime, setting time and board strength. The course closes on energy consumption, on storage and moisture protection, and on product consistency.

What you will learn

- Assess limestone quality and control calcination for target reactivity
- Operate hydrators and produce stable, fine hydrated lime
- Match lime products to construction, water and metallurgical uses
- Calcine gypsum to the correct hemihydrate grade
- Manufacture plaster and plasterboard with controlled setting
- Use additives and retarders purposefully
- Test reactivity, available lime and setting time, and control energy use

Who should attend

- Lime and gypsum plant operators and supervisors
- Kiln and hydrator operators
- Quality staff in building materials manufacture
- Production managers at plaster and board plants
- Technical sales staff supplying lime products

Course outline

- 01** Too far or not far enough
- 02** Limestone quality and calcination chemistry
- 03** Kiln types and reactivity
- 04** Slaking, hydrator operation and hydrate quality
- 05** Lime uses across construction, water and metals
- 06** Gypsum rock, calcination and stucco grades
- 07** Plaster and plasterboard manufacture
- 08** Additives, testing, energy use and moisture protection

Upcoming dates



Dates	Venue	Format	Fee per delegate
30 September to 2 October 2026	Lusaka, Zambia	Classroom	USD 995
6 to 8 January 2027	Online	Online	R6,500
25 to 27 January 2027	Johannesburg, South Africa	Classroom	R14,950
8 to 10 February 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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