



MANUFACTURING AND PRODUCTION

Clay Brick Manufacturing and Kiln Operations

3 day course

Classroom, online or in-house

Course overview

A brickworks turns a clay deposit that varies across the pit into a product sold on strength and appearance, and fires it in a kiln that consumes most of the factory's energy bill. This course covers both problems. Delegates work through clay geology, winning and the stockpiling and blending that even out a variable deposit. Preparation follows through crushing, grinding, screening and the water addition that gives workable body. Forming is covered across extrusion and soft mud methods, with die design, wire cutting and the lamination faults extrusion introduces. Drying is treated in detail, since most cracking happens before a brick reaches the kiln: shrinkage, drying rate and humidity control. Firing follows, covering the tunnel and clamp kilns used in the region, firing curves, soaking and the reactions that develop strength and colour. Fuel use and energy cost per thousand are addressed. Testing is covered for strength, absorption and efflorescence. The course closes on colour consistency, on sorting and on kiln troubleshooting.

What you will learn

- Blend a variable clay deposit into a consistent body
- Prepare clay through crushing, grinding and water addition
- Form by extrusion or soft mud and avoid lamination faults
- Control drying rate and humidity to prevent cracking
- Run a firing curve that develops strength and colour
- Reduce fuel use and cost per thousand bricks
- Test strength, absorption and efflorescence, and troubleshoot a kiln

Who should attend

- Brickworks production supervisors and operators
- Kiln operators and firemen
- Quality staff testing clay products
- Plant managers at brick and clay product factories
- Engineers specifying clay masonry

Course outline

- 01 A variable pit and an energy bill
- 02 Clay geology, winning and blending
- 03 Crushing, grinding and body preparation
- 04 Extrusion, soft mud forming and die design
- 05 Lamination faults
- 06 Drying, shrinkage and humidity control
- 07 Firing curves, soaking and colour development
- 08 Fuel cost, testing, sorting and kiln troubleshooting

Upcoming dates



Dates	Venue	Format	Fee per delegate
28 to 30 October 2026	Johannesburg, South Africa	Classroom	R14,950
2 to 4 November 2026	Maputo, Mozambique	Classroom	USD 995
16 to 18 December 2026	Online	Online	R6,500
22 to 24 February 2027	Kampala, Uganda	Classroom	USD 995

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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