

**DRILLING, WELLS AND RESERVOIR ENGINEERING**

Well Cementing Design and Operations

5 day course

Classroom, online or in-house

Course overview

Sustained casing pressure on an old well can usually be traced back to the primary cement job: a channel left by poor centralisation, a slurry that gelled before it was placed, a spacer that never cleaned off the mud cake. Delegates study cement chemistry and API classes, additives for density, thickening time, fluid loss and gas migration, and the laboratory tests that prove a design. Placement is then engineered: centraliser spacing, displacement efficiency, spacer and wash design, pressures during pumping and job simulation. Liner, stage, squeeze and plug jobs are covered alongside foamed and lightweight systems. Evaluation with CBL, VDL and ultrasonic logs closes the programme. Delegates leave able to design a slurry and job plan, supervise placement and judge whether zonal isolation was achieved.

What you will learn

- Explain hydration chemistry and the properties of API cement classes
- Select additives to control density, thickening time and fluid loss
- Interpret laboratory test results for a proposed slurry
- Design spacers and washes that remove mud and mud cake
- Calculate centraliser placement and expected standoff
- Plan pumping schedules that respect the fracture gradient
- Design squeeze and plug cement operations
- Interpret cement bond and ultrasonic logs to assess zonal isolation

Who should attend

- Cementing engineers and field specialists
- Drilling engineers responsible for cement programmes
- Drilling supervisors overseeing cement jobs
- Well integrity engineers
- Laboratory technicians testing cement slurries

Course outline

- 01 Zonal isolation objectives and cement chemistry
- 02 API classes, additives and slurry design
- 03 Laboratory testing and thickening time
- 04 Mud removal, spacers and centralisation
- 05 Job hydraulics and placement simulation
- 06 Liner, stage and foamed cementing
- 07 Squeeze cementing and cement plugs
- 08 Job execution and quality control
- 09 Cement evaluation logs

Upcoming dates



Dates	Venue	Format	Fee per delegate
19 to 23 October 2026	Online	Online	R8,500
30 November to 4 December 2026	Durban, South Africa	Classroom	R19,950
4 to 8 January 2027	Maseru, Lesotho	Classroom	R19,950
11 to 15 January 2027	Cape Town, 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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