



ENGINEERING AND TECHNICAL TRAINING

Structural Inspection and Condition Assessment of Buildings

3 day course

Classroom, online or in-house

Course overview

A structure rarely collapses without warning; it deteriorates visibly for years while everyone who walks past it stops noticing. This course teaches how to look. Delegates work through structural forms and load paths, since an inspector who cannot trace how load reaches the ground cannot judge what a crack means. Deterioration mechanisms are covered by material: reinforcement corrosion and carbonation in concrete, corrosion and fatigue in steel, decay in timber and movement in masonry. Crack patterns are read as evidence, distinguishing settlement, thermal, shrinkage and structural distress. Inspection method follows, covering visual survey, access, recording and photography that will still be interpretable later. Testing is addressed: cover meter, rebound hammer, half cell potential, core sampling and load testing, with the limits of each. Assessment and rating of condition follow. The course closes on prioritising repair, on propping an unsafe structure and on reporting to an owner who must act.

What you will learn

- Trace load paths through common structural forms
- Identify deterioration mechanisms in concrete, steel, timber and masonry
- Read crack patterns as evidence of a specific cause
- Conduct and record a visual inspection that remains interpretable
- Apply cover meter, rebound hammer, half cell and coring within their limits
- Rate condition and prioritise repair
- Prop an unsafe structure and report so an owner can act

Who should attend

- Structural and civil engineers
- Building inspectors and facilities engineers
- Maintenance managers responsible for building stock
- Municipal building control staff
- Loss adjusters assessing structural damage

Course outline

- 01 Deteriorating in plain sight
- 02 Structural forms and load paths
- 03 Corrosion and carbonation in concrete
- 04 Steel, timber and masonry deterioration
- 05 Reading crack patterns
- 06 Visual survey, access and recording
- 07 Cover meter, half cell, coring and load testing
- 08 Condition rating, propping, repair priority and reporting

Upcoming dates



Dates	Venue	Format	Fee per delegate
16 to 18 November 2026	Kigali, Rwanda	Classroom	USD 995
9 to 11 December 2026	Online	Online	R6,500
21 to 23 December 2026	Johannesburg, South Africa	Classroom	R14,950
30 December 2026 to 1 January 2027	Cape Town, 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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