



ENGINEERING AND TECHNICAL TRAINING

Bridge Construction and Maintenance

5 day course

Classroom, online or in-house

Course overview

Bridges concentrate a network's risk into single structures, and a region with many river crossings and few alternative routes cannot absorb the loss of one. This course covers building and keeping them. Delegates work through bridge types and where each is appropriate, from culverts and slab bridges to beam, box girder and cable supported structures. Substructure construction follows: abutments, piers and the river works and cofferdams that make them possible. Deck construction is covered across in situ, precast beam and incremental methods. Prestressing is addressed at a practical level, including stressing operations and grouting. Bearings, expansion joints and drainage are treated as the components that cause most long term trouble. Inspection regimes follow, covering routine, principal and special inspections. Common defects are addressed, including scour, which is the leading cause of bridge loss. Load assessment and posting are covered. The course closes on repair, strengthening and emergency response after a flood.

What you will learn

- Select a bridge type appropriate to the crossing
- Construct abutments and piers, including river works and cofferdams
- Compare in situ, precast beam and incremental deck construction
- Carry out prestressing and grouting operations correctly
- Maintain bearings, expansion joints and deck drainage
- Run routine, principal and special inspection regimes
- Assess scour and load capacity, and respond after a flood

Who should attend

- Bridge and structural engineers
- Roads authority maintenance staff
- Site engineers on bridge contracts
- Bridge inspectors
- Contractors delivering structures on road projects

Course outline

- 01 Risk concentrated in single structures
- 02 Bridge types and selection
- 03 Abutments, piers and cofferdams
- 04 In situ, precast and incremental decks
- 05 Prestressing and grouting
- 06 Bearings, joints and drainage
- 07 Inspection regimes
- 08 Scour, load assessment, repair and flood response

Upcoming dates

Dates	Venue	Format	Fee per delegate
19 to 23 October 2026	Durban, South Africa	Classroom	R19,950
7 to 11 December 2026	Kampala, Uganda	Classroom	USD 1,325
15 to 19 February 2027	Online	Online	R8,500



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@afiscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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