



ENGINEERING AND TECHNICAL TRAINING

Structural Steel Design and Fabrication

5 day course

Classroom, online or in-house

Course overview

Structural steel is designed on paper, fabricated in a shop and erected in conditions neither anticipated, and the connections are where the three meet and where most problems occur. This course follows that sequence. Delegates work through loads, load combinations and the limit states a structure must satisfy, member behaviour in tension, compression, bending and combined action, and connection design covering bolted and welded arrangements. Fabrication follows: shop drawings, tolerances, fit up and the dimensional control that determines whether steel goes together on site. Surface preparation and protective coating are covered. Erection sequence, temporary stability and bracing are addressed. The course closes on inspection, on modification of existing structures and on assessing corroded steelwork.

What you will learn

- Determine loads and load combinations for a structure
- Analyse member behaviour in tension, compression and bending
- Design bolted and welded connections
- Produce and check shop drawings and dimensional tolerances
- Specify surface preparation and protective coating
- Plan erection sequence, temporary stability and bracing
- Inspect, modify and assess corroded existing steelwork

Who should attend

- Structural and civil engineers
- Fabrication shop supervisors and detailers
- Erection and construction supervisors
- Inspection and quality staff
- Maintenance engineers assessing existing structures

Course outline

- 01 Where paper, shop and site meet
- 02 Loads and load combinations
- 03 Member behaviour and limit states
- 04 Bolted connections
- 05 Welded connections
- 06 Shop drawings, tolerances and fit up
- 07 Surface preparation and coating
- 08 Erection, stability, inspection and existing steelwork

Upcoming dates

Dates	Venue	Format	Fee per delegate
21 to 25 September 2026	Online	Online	R8,500
11 to 15 January 2027	Nairobi, Kenya	Classroom	USD 1,325
22 to 26 February 2027	Kampala, Uganda	Classroom	USD 1,325
15 to 19 March 2027	Johannesburg, 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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