



PROCESS AND CHEMICAL ENGINEERING

Corrosion Control and Prevention

5 day course

Classroom, online or in-house

Course overview

Corrosion is the single largest cause of unplanned loss of containment in process plant, and most of it is predictable from the metallurgy, the fluid and the temperature. This course builds that prediction. Delegates work through the electrochemical basis of corrosion, then through the mechanisms that actually appear in service: uniform loss, pitting, crevice attack, galvanic coupling, stress corrosion cracking and microbiologically influenced corrosion. Material selection, coatings, inhibitors and cathodic protection are covered as the four levers available, along with the monitoring that tells you whether any of them is working. The course closes on estimating remaining life and on the inspection interval that follows from a measured rate.

What you will learn

- Explain the electrochemical basis of corrosion in process conditions
- Identify the mechanism behind an observed pattern of attack
- Select materials appropriate to fluid, temperature and stress
- Specify coatings, linings and inhibitors for a given service
- Apply cathodic protection where it is the correct control
- Monitor corrosion rate and interpret coupons, probes and thickness data
- Estimate remaining life and set an inspection interval from a measured rate

Who should attend

- Process, mechanical and materials engineers
- Inspection and integrity engineers
- Maintenance and reliability staff
- Operations engineers in refining, petrochemical and mining
- Graduate engineers entering an integrity role

Course outline

- 01 The electrochemistry behind corrosion
- 02 Uniform loss, pitting and crevice attack
- 03 Galvanic coupling and dissimilar metals
- 04 Stress corrosion cracking and hydrogen damage
- 05 Microbiologically influenced corrosion
- 06 Material selection for fluid, temperature and stress
- 07 Coatings, linings and chemical inhibition
- 08 Cathodic protection as a control
- 09 Monitoring, rate measurement and remaining life

Upcoming dates

Dates	Venue	Format	Fee per delegate
26 to 30 October 2026	Addis Ababa, Ethiopia	Classroom	USD 1,325
30 November to 4 December 2026	Online	Online	R8,500
7 to 11 December 2026	Durban, South Africa	Classroom	R19,950
18 to 22 January 2027	Nairobi, Kenya	Classroom	USD 1,325



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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