



PROCESS AND CHEMICAL ENGINEERING

Heat Exchangers: Operation and Fouling Control

5 day course

Classroom, online or in-house

Course overview

Heat exchangers determine how much energy a plant recovers and how long it can run between cleans, and both are lost slowly enough that nobody notices until the unit is rate limited. This course covers keeping them working. Delegates work through exchanger types and their selection, thermal and hydraulic performance and how each degrades, and performance monitoring that detects fouling early. Fouling mechanisms are treated in detail, including the chemistry and velocity conditions that cause each, along with mitigation and cleaning options. Mechanical integrity, tube failures and repair are covered, and the course closes on retrofit and network optimisation for energy recovery.

What you will learn

- Select an exchanger type appropriate to the duty and fluids
- Assess thermal and hydraulic performance and recognise degradation
- Monitor performance so fouling is detected early
- Identify the fouling mechanism from the conditions present
- Choose mitigation and cleaning options and time them economically
- Diagnose tube failures and specify repair
- Improve energy recovery through retrofit and network changes

Who should attend

- Process and energy engineers
- Maintenance and reliability engineers
- Panel and field operators
- Inspection and integrity staff
- Technical services and optimisation engineers

Course outline

- 01 Exchanger types and selection
- 02 Thermal and hydraulic performance
- 03 Performance monitoring and early detection
- 04 Fouling mechanisms and their conditions
- 05 Mitigation and chemical treatment
- 06 Cleaning options and economic timing
- 07 Tube failures and mechanical repair
- 08 Retrofit and heat recovery network changes

Upcoming dates

Dates	Venue	Format	Fee per delegate
5 to 9 October 2026	Accra, Ghana	Classroom	USD 1,325
11 to 15 January 2027	Kigali, Rwanda	Classroom	USD 1,325
15 to 19 February 2027	Online	Online	R8,500
8 to 12 March 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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