



PROCESS AND CHEMICAL ENGINEERING

Distillation: Process, Control and Troubleshooting

5 day course

Classroom, online or in-house

Course overview

Distillation columns consume more energy than any other separation on a plant and produce more chronic operating problems than any other unit. This course covers running them well. Delegates work through vapour liquid equilibrium and the theoretical basis of a separation, column internals including trays and packing and how each fails, and the operating variables that actually control product purity. Control strategy is covered in depth, including the pairing decisions that determine whether a column is stable or fights itself. Troubleshooting takes the second half: flooding, weeping, entrainment, fouling and off specification product are each traced from symptom through column profile to cause.

What you will learn

- Apply vapour liquid equilibrium to a separation problem
- Describe tray and packed column internals and their failure modes
- Identify the operating variables that control product purity
- Select a control strategy and pair variables sensibly
- Diagnose flooding, weeping and entrainment from operating data
- Trace off specification product through the column profile to its cause
- Reduce column energy consumption without losing separation

Who should attend

- Process engineers in refining and petrochemicals
- Panel operators and shift supervisors
- Control and instrumentation engineers
- Technical services and optimisation staff
- Graduate engineers entering process operations

Course outline

- 01 Why columns dominate energy and chronic problems
- 02 Vapour liquid equilibrium and separation basis
- 03 Trays, packing and internals
- 04 Operating variables and product purity
- 05 Control strategy and variable pairing
- 06 Flooding, weeping and entrainment
- 07 Fouling and column profile interpretation
- 08 Energy reduction without losing separation

Upcoming dates

Dates	Venue	Format	Fee per delegate
21 to 25 September 2026	Addis Ababa, Ethiopia	Classroom	USD 1,325
19 to 23 October 2026	Kampala, Uganda	Classroom	USD 1,325
16 to 20 November 2026	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@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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