PROCESS AND CHEMICAL ENGINEERING

Heat Integration and Pinch Analysis

3 day course Classroom, online or in-house

Course overview

Pinch analysis identifies the minimum energy a process can use before any equipment is specified, which turns energy reduction from a search for opportunities into a calculation. This course covers applying it. Delegates work through stream data extraction, which is where most studies go wrong, composite curves and the pinch itself, and the targets for hot utility, cold utility and heat exchange area. Network design follows, including the rules that keep a design at target. Retrofit receives detailed attention, since existing plant constrains what can be changed. The course closes on utility system integration and on presenting a case that will be funded.

What you will learn

- Extract stream data correctly from a process
- Construct composite curves and locate the pinch
- Set energy and area targets before designing
- Design a heat exchanger network that meets target
- Apply the rules that prevent cross pinch heat transfer
- Retrofit an existing network within its constraints
- Present an energy case that will be funded

Who should attend

- Process and energy engineers
- Design and project engineers
- Technical services and optimisation staff
- Utilities engineers
- Managers evaluating energy investment

Course outline

01 Targets before design
02 Stream data extraction
03 Composite curves and the pinch
04 Energy and area targets
05 Network design rules
06 Cross pinch transfer and its cost
07 Retrofit within existing constraints
08 Utility integration and the funding case

Upcoming dates

Dates	Venue	Format	Fee per delegate
18 to 20 November 2026	Gaborone, Botswana	Classroom	R14,950
14 to 16 December 2026	Pretoria, South Africa	Classroom	R14,950
6 to 8 January 2027	Cape Town, South Africa	Classroom	R14,950
13 to 15 January 2027	Online	Online	R6,500

Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** 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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