



OIL, GAS AND PETROCHEMICALS TRAINING

Refinery Planning, Crude Selection and Yield Optimisation

5 day course

Classroom, online or in-house

Course overview

Buying the wrong crude cargo can cost a refinery more in a month than a unit outage, yet the choice is still often made on headline price. This programme is about the planning economics behind that choice. It begins with crude assays and how to value a crude from its yield pattern, sulphur, acidity and metals. Linear programming models are then built and interrogated: unit submodels, pooling, blending constraints and shadow prices. Planners use them to calculate breakeven values against a marker crude, test unit capacity limits, plan around turnarounds and compare product slates against market crack spreads. The monthly cycle from crude purchase through to backcasting closes the course. Planners and traders leave able to run a refinery LP, challenge its answers and turn them into a feasible operating plan.

What you will learn

- Interpret crude assay data for yields, quality and processing constraints
- Explain the structure of a refinery linear programming model
- Use shadow prices and marginal values to guide decisions
- Calculate crude breakeven values against a reference crude
- Evaluate the effect of unit capacity limits on margin
- Plan production around turnarounds and seasonal product demand
- Compare actual results with plan through backcasting
- Translate model output into an executable monthly operating plan

Who should attend

- Refinery planners and schedulers
- Crude traders and supply analysts
- Economists and commercial staff in refining
- Process engineers supporting planning models
- Refinery managers who approve monthly plans

Course outline

- 01 Refining margins and crack spreads
- 02 Crude assays and valuation
- 03 Linear programming fundamentals
- 04 Building unit and blending submodels
- 05 Crude selection and breakeven analysis
- 06 Capacity constraints and debottlenecking
- 07 Turnaround and seasonal planning
- 08 Backcasting and plan versus actual

Upcoming dates

Dates	Venue	Format	Fee per delegate
30 November to 4 December 2026	Cape Town, South Africa	Classroom	R19,950
22 to 26 February 2027	Pretoria, South Africa	Classroom	R19,950
22 to 26 March 2027	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**.

AfriScience Group | +27 61 536 6531 | info@afriscience.co.za | Pretoria, Gauteng, South Africa