



PROCESS AND CHEMICAL ENGINEERING

Urea and Fertiliser Production

5 day course

Classroom, online or in-house

Course overview

Urea synthesis runs at conditions that attack the equipment containing it, which makes corrosion and passivation an operating variable rather than a maintenance concern. This course covers the plant. Delegates work through synthesis chemistry and equilibrium, the synthesis loop and its high pressure section, and recirculation, evaporation and concentration. Prilling and granulation are covered including product quality and dust control. Corrosion and passivation air management receive detailed attention. Blending and compound fertiliser production follow. The course closes on energy consumption, emissions and the safety hazards of ammonia and high pressure service.

What you will learn

- Explain urea synthesis chemistry and equilibrium
- Operate the synthesis loop and its high pressure section
- Run recirculation, evaporation and concentration
- Control prilling or granulation for product quality
- Manage corrosion and passivation air in urea service
- Produce blended and compound fertilisers to specification
- Control the safety hazards of ammonia and high pressure service

Who should attend

- Fertiliser plant process engineers
- Panel operators and shift supervisors
- Maintenance and corrosion engineers
- Quality and laboratory staff
- Production managers in fertiliser manufacturing

Course outline

- 01 Synthesis chemistry and equilibrium
- 02 The synthesis loop and high pressure section
- 03 Recirculation and concentration
- 04 Evaporation
- 05 Prilling and granulation
- 06 Corrosion and passivation air
- 07 Blending and compound fertilisers
- 08 Energy, emissions and safety

Upcoming dates

Dates	Venue	Format	Fee per delegate
23 to 27 November 2026	Cape Town, South Africa	Classroom	R19,950
28 December 2026 to 1 January 2027	Online	Online	R8,500
22 to 26 March 2027	Johannesburg, South Africa	Classroom	R19,950

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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