MINING AND MINERALS TRAINING

Uranium Processing and Radiation Protection

5 day course Classroom, online or in-house

Course overview

Uranium is processed under a regulatory regime that governs the material from the pit to the drum, and an operation that treats radiation protection as a safety add on rather than a licence condition will eventually lose the licence. This course integrates the two. Delegates work through uranium mineralogy and the ore types found in the region, then through acid and alkaline leaching and the oxidant control each requires. Solid liquid separation and clarification follow. Ion exchange and solvent extraction are covered as the concentration and purification routes. Precipitation, drying and drumming of the final product are addressed, including specification. Radiation protection is treated properly: the sources present, dose pathways, external gamma, radon progeny and dust inhalation. Monitoring, dosimetry and dose limits follow. Contamination control, transport and security of nuclear material are addressed. The course closes on tailings and radon management, on decommissioning and on regulatory reporting.

What you will learn

- Relate uranium mineralogy to leaching route selection
- Control oxidant and conditions in acid and alkaline leaching
- Operate ion exchange and solvent extraction for purification
- Precipitate, dry and drum product to specification
- Identify dose pathways including gamma, radon progeny and dust
- Run monitoring, dosimetry and contamination control
- Manage tailings, radon, transport security and regulatory reporting

Who should attend

- Metallurgists and process engineers on uranium operations
- Radiation protection officers
- Plant operators in uranium recovery circuits
- Health and safety staff at uranium mines
- Regulatory and licensing personnel

Course outline

01 A licence condition, not a safety add on
02 Uranium mineralogy and ore types
03 Acid and alkaline leaching
04 Solid liquid separation and clarification
05 Ion exchange and solvent extraction
06 Precipitation, drying and product specification
07 Dose pathways, monitoring and dosimetry
08 Contamination, transport security, tailings and reporting

Upcoming dates

Dates	Venue	Format	Fee per delegate
5 to 9 October 2026	Harare, Zimbabwe	Classroom	USD 1,325
2 to 6 November 2026	Online	Online	R8,500
1 to 5 February 2027	Cape Town, 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**.

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