

## **URANIUM ORE TREATMENT SHORT COURSE OUTLINE**

- Uranium content of various sources
- Common uranium minerals
- Implications of mineral composition
- Implications of gangue minerals
- Pre-concentration
- Pre-roasting
- Leaching mediums
- Acid leaching of uranium minerals
- Carbonate leaching of uranium minerals
- Leaching processes including agitated, pressure, heap, in-situ etc.
- By-product uranium recovery processes
- Ore comminution
- Thickener options
- Filter options
- Clarifier options
- Polishing filter options
- Ion exchange
- Types of resins
- IX equipment
- Solvent extraction
- Types of SX extractants
- SX contactors used in commercial uranium plants
- Other available six contactors
- Direct precipitation
- Product recovery processes
- Testwork & scale-up
- Keys to successful project development
- Agitated leaching testwork
- Typical design criteria – acid leach
- Grade control
- Plant layout
- Special health and safety issues
- Industry trends