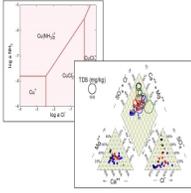




Geochemist Workbench - Online

This 6 week online course is aimed at providing attendees with an understanding of how to use Geochemist Workbench to model mine drainage chemistry and treatment. The workshop is focused on the practical application of modeling and will use data collected from various coal mine discharges and treatment systems.



This course is administered online in the Training Virtual Campus and is available during scheduled times throughout the year. Please follow the TIPS scheduling and registration procedures to enroll. Contact your TIPS Training Contact or the TIPS Training Program Lead with questions.

Duration: Six-week Period
Course Code: VGWB

TOPICS COVERED

- ▼ Creating activity and Eh/pH diagrams to identify solubility controls on mine drainage
- ▼ Developing strategies to constrain a model to produce usable “real-world” results
- ▼ Modeling chemical consumption, treatment pH, and effluent chemistry for NaOH, CaO, Ca(OH)₂, CaCO₃, and Na₂CO₃ treatment systems and predicting the treatment costs (both active and passive treatment systems)
- ▼ Analyzing the effect of exsolving CO₂ (decarbonation step) prior to alkali dosing. The effect on chemical consumption, mineral precipitation, and treatment costs will be analyzed
- ▼ Using a model to develop a comprehensive watershed restoration strategy to achieve in-stream restoration goals for abandoned mine land scenarios
- ▼ Modeling heterogeneous and homogenous ferrous iron oxidation to size ferrous reactor tanks and passive treatment

COURSE PRE-REQUISITES: Attendees should have an understanding of geochemistry and prior experience with mine drainage is desired, but not necessary. **Class size limited to 12–17 students.**