

PROFESSIONAL DEVELOPMENT

WATER IN MINE OPS & SLOPE STABILITY

Course begins
June 10, 2025



THE UNIVERSITY OF ARIZONA

School of Mining
& Mineral Resources

Offered by the **Geotechnical Center of Excellence**, this 15-week professional development course is asynchronous, featuring approximately 30 hours of pre-recorded content. It includes live, virtual panel discussions with subject matter experts and remains accessible for a full year after the live component concludes.

Course content is based on the LOP's Guidelines for Evaluating Water in Pit Slope Stability text, with additional and updated material for controlling water in mining operations and improving geotechnical slope stability. The course will also include case studies of water management challenges and solutions in open pit and underground mines. **Course begins June 10, 2025, with a 15-week live component and year-long access.**

Topics covered:

- Framework and site characterization
- Development of a conceptual hydrogeological model
- Implementation of mine water control systems
- Numerical model applications
- Monitoring and design reconciliation
- Open pit and underground water management

This course is for:

Engineers, Geologists, Hydrogeologists, Mining Engineers, Managers, other Mining or Geotechnical Professionals interested in gaining a better understanding of the role water plays in mine operations and slope stability.

LEAD TECHNICAL ADVISORS



Geoff Beale

Global Technical
Advisor,
Piteau Associates



Jeremy Dowling

Hydrogeology Advisor
and President,
Piteau Associates

\$899 USD

Discounts for GCE members, groups, and students.

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Developed with support from



PITEAU ASSOCIATES
GEOTECHNICAL AND WATER MANAGEMENT CONSULTANTS
A TETRA TECH COMPANY

Developed in collaboration with



Large Open Pit
Project

Questions? Contact gce@arizona.edu or visit mining.arizona.edu/gce

CURRICULUM OUTLINE

SECTION 1

- How Water Affects Mining
- General Introduction To Mine Hydrology
- Dewatering Vs. Depressurization
- Planning Of Mine Hydrology Programs
- Data Collection

SECTION 2

- Porous Medium Vs. Fracture Flow
- Conceptual Model
- Excavation Damaged Zone (Edz)
- Water Balance And Water Quality Concepts
- Global Benchmarking

SECTION 3

- Planning Of Numerical Models
- Water Input To Geotechnical Analysis
- Ground Water And Pore Pressure Models
- Water Balance And Water Quality Tools
- Waste Rock Hydrology

SECTION 4

- Strategic Planning
- Slope Depressurization
- Surface Water Management
- In-Pit Real Estate And Access
- Site-Wide Water Management

SECTION 5

- Monitoring Programs
- Performance Assessment
- Interactive Planning And Risk Management
- Geotechnical And Hydrogeological Guidelines For Mine Closure
- Nine Key Industry Issues

END OF COURSE



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