AusIMM Courses

Tailings Management

PROFESSIONAL CERTIFICATE

Manage risk. Ensure compliance. Build safer tailings management systems.

Course overview

Develop a comprehensive understanding of tailings management across technical, environmental, and social dimensions.

This 8-week online course, developed in collaboration with leading industry experts, delves into geotechnical, geochemical, governance, closure, and socio-economic considerations of tailings management. Participants will explore principles, strategies, and best practices through interactive modules, real-world case studies, and expert-led discussions.

- Learn from industry experts
- Flexible online delivery
- Digital badge on completion

Who should enrol?

AusIMM Courses are open to all, with no formal prerequisites; however, this course is ideally suited to professionals involved in or responsible for tailings management, including:

- Tailings engineers, managers, and operators
- Environmental and geotechnical consultants
- Mining company executives and technical personnel
- Regulators and policy makers
- Community and stakeholder engagement professionals

What you'll learn

Gain practical knowledge and skills in:

- Key elements and global variations in tailings management
- Geotechnical causes of tailings dam failures and risk assessment methods
- Geochemical characteristics of tailings and water balance considerations
- Governance frameworks, monitoring techniques, and emergency response planning
- Closure challenges, residual risk management, and post-mining land use
- Socio-economic impacts, community engagement, and sustainable practices

PD hours
40 hours

Delivery
100% online

Duration
8 weeks

Certificate
Digital credential

Pricing

Member A$2,775
Non-member A$3,625
Membership bundle A$3,031

Prices are in Australian dollars and are inclusive of 10% GST

Discounts available when 3 or more participants book together.

Scan for more information

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onlinecourses@ausimm.com | ausimm.com/courses | (03) 9658 6150 | +61 417 136 033 (*messages only*)

Tailings Management modules

1 Introduction to tailings management

1. Describe the key elements of tailings management
2. Explain the variations in tailings management globally
3. Describe the cause(s) and impact(s) of tailings dam failures
4. Discuss some opportunities for improvement to tailings management

2 Geotechnical considerations

1. Identify the key geotechnical causes of tailings dam failures
2. Explain tailings risk assessment methods and risk acceptability
3. Explain tailings dam/storage design
4. Discuss the key tailings geotechnical parameters
5. Explain construction and operation to ensure compliance with the design intent

3 Geochemical and water considerations

1. Explain the geochemical nature of tailings
2. Identify the potential for contamination from tailings
3. Understand the tailings water balance
4. Describe the management of potentially contaminating tailings

4 Governance and surveillance

1. Interpret multi-stakeholder governance
2. Discuss regional and global guidelines
3. Examine tailings management regulations
4. Interpret corporate governance
5. Discuss types of monitoring
6. Explain links to triggers and emergency response
7. Discuss frequency of monitoring and analysis

5 Tailings management for closure

1. Explain residual risk and tailings closure opportunities
2. Discuss closure challenges for tailings storage facilities
3. Explain capping and revegetation of tailings
4. Discuss learnings from tailings closure case studies

6 Socio-economic considerations

1. Discuss financial and social license to operate
2. Explain why communities matter in tailings management
3. Understand sustainable tailings management
4. Explain effective tailings stewardship
5. Discuss net present value versus whole-of-life accounting
6. Discuss post-mining land use and ecological function

Facilitators

See full facilitator profiles on our course page.

Professor David Williams
Emeritus Professor of Geotechnical Engineering, The University of Queensland and Private Consultant

Peter Chapman
Principal Tailings Engineer, WSP

Angelica Andrade
MPhil Candidate,
The University of Queensland

Laurie Reemeyer
Principal Consultant,
Resourceful Paths

Eduardo Salfate
Principal Mine Waste Closure Consultant, WSP