Future Tails

Graduate Certificate in Tailings Management

THE UNIVERSITY OF WESTERN AUSTRALIA

Upskill and sharpen your knowledge of tailings management and engineering solutions with industry-focused, online, on-demand learning. The Graduate Certificate in Tailings Management is delivered by Future Tails, a five-year initiative funded by sponsors Rio Tinto and BHP, to facilitate industry understanding of best practice mine tailings management and engineering.

With the current acute shortage of suitably trained and qualified tailings management engineers and personnel, a formally recognised qualification in tailings management and engineering will improve your employability and future career outcomes.

Our academically credited micro-credentials (MCs) are short, professional qualifications in different aspects of tailings management and engineering that demonstrate your skills, knowledge and experience in the field. These focused, affordable modules are online, so you can easily fit them in to your schedule.

You can complete one or two to enhance your knowledge and skills in a specific area of tailings, or complete the series of 12 and stack them towards the Graduate Certificate in Tailings Management.*

Whether you're looking to break into this field with a new employer, progress your career, gain PD points or just keep up to date with technology advances and the Global Industry Standard on Tailings Management, these courses can enhance your existing experience with the latest knowledge and skills.

You can study and upskill in tailings testing and geotechnics, water management strategies, risk evaluation and appropriate governance structures.

Micro-credentials course content

INTRODUCTION TO TAILINGS MANAGEMENT	TAILINGS OPERATIONS AND WATER MANAGEMENT	TAILINGS RISK EVALUATION	TAILINGS GOVERNANCE
MC1. Preparation, Transport & Deposition of Tailings Introduction to tailings engineering; variability based on particle size distribution Methods of construction and operation of TSFs	**MC4. Operations** Deposition strategies: layer thickness, maintaining freeboard, decant systems	**MC7. Risk Evaluation** Basics of risk evaluation Methods of risk evaluation: FEMA, bowtie, MCA	**MC10. Compliance** Primary guidelines (ANCOLD, CDA, ICOLD, GISTM, ICMM) Concept of Consequence Category Integrated Knowledge Base
MC2. Basics Of Tailings Geotechnics Particle size distributions Phase diagrams Effective stress	**MC5. Water Balance** Quantifying inputs, design events, extreme events Applied hydrology	**MC8. Monitoring** Modes of failure: introduction to monitoring ALARP; TARPs Controls and control effectiveness	**MC11. Roles And Responsibilities** Accountable Executive, Engineer of Record, Responsible Tailings Facility Person Training programmes, procurement, ensuring adequate resourcing
MC3. Tailings Testing – An Introduction Seepage Consolidation Strength testing	**MC6. Dewatering Technologies** Paste & thickened tailings In-line flocculation Filtered tailings	**MC9. Case Studies of Failures** Mount Polley, Cadia, Fundao, Feijao	**MC12. Tailings Management Plans** Integrating closure Operating manuals

* In order to apply for the Graduate Certificate award you must have a Bachelor of Engineering degree or a degree in a related field and have met UWA's English language competency requirements.

Course structure

You can apply for the Graduate Certificate in Tailings Management after successfully completing all 12 micro-credentials and associated assessments.*

- Each micro-credential (MC) will be offered online over an 8-week period.
- You may only take a micro-credential (MC) in a colour sequence once you have taken the preceding MC in that colour sequence. For example, you may only enrol in MC3 once you have successfully completed MC1 and MC2.
- You can enrol in MCs in different colour bands concurrently. For example, you can enrol in MC1 and MC7 at the same time in Q1 2022.

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Estimated completion time

Our micro-credentials have been designed so you can conveniently balance your work and study.

Students commencing in 2022 will be able to complete in a minimum time of 18 months, if micro-credentials are taken concurrently. Alternatively, you have the flexibility to take the micro-credentials individually over a 36-month period.

Calendar of Micro-credentials in Tailings Management

	2021		2022				2023				2024			
	Jul to Sep	Oct to Dec	Jan to Mar	Apr to Jun	Jul to Sep	Oct to Dec	Jan to Mar	Apr to Jun	Jul to Sep	Oct to Dec	Jan to Mar	Apr to Jun	Jul to Sep	Oct to Dec
INTRODUCTION TO TAILINGS MANAGEMENT	MC1	MC2	MC1	MC2	MC3		MC1	MC2	MC3		MC1	MC2	MC3	
TAILINGS OPERATIONS AND WATER MANAGEMENT				MC4	MC5	MC6	MC5	MC6		MC4	MC5	MC6		MC4
TAILINGS RISK EVALUATION			MC7	MC8	MC9				MC7	MC8	MC9		MC7	MC8
TAILINGS GOVERNANCE						MC10	MC11	MC12				MC10	MC11	MC12

uwa.edu.au/study/courses/graduate-certificate-in-tailings-management

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