



**Curtin Credentials**

# ***Introduction to Environment, Land, Water Management and Closure Planning over the Life of an Asset (LoA)***



**Start:** Please refer to [creds.curtin.edu.au](https://creds.curtin.edu.au)\*



**Duration:**  
30 hours†



**Delivery Mode:**  
Online^



**Price:**  
\$2269 (excl. GST)§

***Improve closure outcomes in mining operations based on environmental principles.***

In this micro-credential, you'll discover how mining intersects with environmental responsibility and regulatory compliance, and how to manage stakeholder engagement. You'll explore the challenges and risks of asset management and learn how to optimise closure outcomes, while addressing key environmental concerns.

## Who is this credential for?

This credential is particularly suitable for:

- Established mining industry professionals.
- Aspiring mining industry professionals.
- Mining industry service providers (eg finance, investment, consultancies).
- First Nations peoples.

## What you will learn

By completing this credential you will learn:

- how to identify, prioritise and manage closure risks
- the differences between positive and negative closure outcomes
- how to apply an integrated, multidisciplinary approach to closure
- how to discern the rightful claims and interests of key stakeholders and rightsholders
- the importance of community engagement
- strategies to enhance biodiversity after the closure of a mining asset
- the socio-environmental implications and risks of pit lakes
- how to manage environmental impact assessments and site investigations.

## Key Topics

Your learning journey includes access to 8 online modules.

Module 1 – Introduction to the Unit and the Curtin Learner Journey

Module 2 – Asset Levers for Better Closure Outcomes

Module 3 – Mine Planning Over LoA and OBK

Module 4 – Water Management

Module 5 – Landforms and Tailings

Module 6 – Fundamental Processes, Risks, and Controls

Module 7 – Environmental Impact Assessments and Site Investigations

Module 8 – Biodiversity, Completion Criteria, and Rehabilitation Trials

## Assessment

To successfully complete this credential, you are required to pass a final assessment. To demonstrate what you have learned, you will develop a comprehensive report that critically analyses the integrated approach to Environment, Land, and Water Management (ELWM) and Closure Planning across the Life of an Asset (LoA).

## Earn a badge

Once you successfully complete and pass the final assessment, you'll earn a digital badge that is instantly shareable to your social networks (including LinkedIn) which showcases your new skills and knowledge mastery.



## Extend

This credential allows you to acquire intermediate knowledge and skills in a discipline. This credential usually requires you to have some related prior learning or experience.

You will also earn 5 credit points which are in line with Australian Qualification Framework Level 8 criteria (<https://www.aqf.edu.au/framework/aqf-levels#toc-aqf-level-8-criteria-2>), ensuring comprehensive theoretical and/or technical knowledge of the credential. 100 credit points are required to earn a Graduate Certificate at Curtin.

## Discover more

Curtin Credentials focus on five themes, which have been carefully curated based on what's most relevant and valuable to professionals today, and in the future. This credential fits within the following theme:



## Future of Work

Thrive and adapt in the changing world of work by developing and broadening your skillset in a range of areas including work design and cognitive flexibility.

## Make tomorrow better.

» [creds.curtin.edu.au](https://creds.curtin.edu.au)

This publication is available in alternative formats on request.

\* Curtin may cancel or reschedule a credential at any time and for any reason as it sees fit. The Start Date and the other details of this credential are provided as a general guide only and may change from time to time.

† This credential involves 30 hours of online resources, readings, activities and assessments at your own pace. However to pass and gain 5 credit points, you may need to commit further time.

^ Learning is done completely online.

§ Price subject to change. Please check price at time of purchase.

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CRICOS Provider Code 00301U



For  
more  
information

## Curtin Credentials

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## Meet your facilitators



### Dr Michael Just

**Research Fellow/School of Molecular and Life Sciences (MLS)**

Dr. Michael Just is a Research Fellow at Curtin University and a Senior Restoration Ecologist, specialising in ecological restoration, seed ecology, and

conservation of threatened ecological communities. His work in Australia's ecosystems, particularly through his PhD completed with the ARC Centre for Mine Site Restoration, has significantly advanced practical conservation strategies and restoration ecology. .

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### Dr George Barakos

**Lecturer/WASM: Minerals, Energy and Chemical Engineering**

Dr Barakos has significant experience not only in the academia but also in the mining industry, having worked as a consulting engineer in mining operations in Greece for several years.

To keep pace with the evolution in the mining industry and its transition to the digital era, his recent research interest is also focusing on the automation and digitalisation of mining operations, as well as the digitalisation of the technical, economic and environmental evaluation of mining projects; how to introduce the IoT in mining operations, digitalisation of the mining project evaluation process and commodity market analyses using big data.

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### Zane Hughes

**Project Manager/School of Molecular and Life Sciences (MLS)**

Zane is a Waanyi Traditional Custodian of North West Queensland and has held leadership roles in a range of mining companies and

infrastructure project development companies and in Indigenous corporations representing Native Title holders. He has an in-depth understanding and knowledge of the mining sector, processes, and operational drivers.

Aside from his role as a Project Lead Researcher at the Cooperative Research Centre for Transformations in Mining Economies (CRC TiME), Zane has served on a number of committees and represented Native Title interests across a range of national forums and is also a Research Fellow for the Faculty of Science and Engineering at Curtin University.

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### Dr Apurna Ghosh

**Senior Lecturer/WASM: Minerals, Energy and Chemical Engineering**

Dr Apurna Ghosh has been actively involved in teaching and research for more than two decades. He is actively involved in teaching Mine Safety

Management, Mine Planning and Design, Resource Estimation and Mining Systems at Curtin. Dr Apurna works in mine safety and environment and identifies the workplace risk factors in different mining set-up which are the key input parameters for workplace health and safety in mineral industry.

Dr Apurna has written over 50 technical articles of international standards which are the outcomes of his research work on mine safety. These include topics such as dust control which have prompted him to understand the plight of miners and their families in mineral industry.

He has also keen interest on Geoinformatics which includes generation of Digital Elevation Model for selection of suitable aquifer recharge sites, and monitoring of catchment area.

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### Professor Chris Rawson

**Deputy Pro Vice-Chancellor/  
Faculty of Science and  
Engineering**

Chris is an environmental scientist with a research background in understanding and predicting impacts of human activities on marine ecosystems. He is

dedicated to facilitating the delivery of high quality, industry connected tertiary teaching and learning in STEM. Chris was instrumental in establishing a course for high performing science students in which learners are challenged to address global problems through application of science and technology to propose a social enterprise or research project courses.

Chris has held a range of leadership positions, primarily focussed on learning and teaching, and is now the Deputy Pro-Vice Chancellor for the Faculty of Science and Engineering.

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### Dr. Mohammadali Sepehri

**Lecturer/WASM: Minerals, Energy  
and Chemical Engineering**

Dr. Mohammadali (Ali) Sepehri is a Lecturer at Curtin University. He received his PhD and MSc degrees in Mining Engineering focused on advanced Geomechanical numerical modelling from

University of Alberta, Canada. Ali is a Professional Mining Engineer (P.Eng) with strong academic and industrial research professional in Geomechanics. He has been involved in many geomechanical mining projects, including open pit and underground mine stability design, ground control and stability assessments, ground support design, geomechanical monitoring and instrumentation, prediction of mining-induced surface subsidence, validation and verification of advanced 3D geomechanical numerical models.

His main research interest is in field of Geomechanics including rock engineering design, slope stability, Geotechnical Aspects of Mine Tailings, Underground Thermal Energy Storage, and numerical modelling.

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## Live Sessions

This course involves three live virtual sessions in which you will experience real-time learning with expert instructors and an engaged community of learners. These sessions are:

- Get Started Session
- Live session 1 (Module 4 - Water)
- Live session 2 (Module 8 - Rehab)

To find out the dates and times for these sessions, please refer to the course information found at [creds.curtin.edu.au](https://creds.curtin.edu.au).

## For more information

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