

Mine Electrification

ASSOCIATE CERTIFICATE



Drive decarbonisation, boost operational efficiency, and lead your minesite into a zero-emissions future.

Course overview

This industry-aligned course explores the technical, operational, and strategic aspects of implementing Battery Electric Vehicles (BEVs) in mining. It's designed for professionals at all levels—from early-career engineers to corporate leaders—who are involved in planning, deploying, or managing electrified fleets.

Across four modules, you'll gain insight into mine electrification drivers, BEV systems and infrastructure, battery safety, change management, and business case development. You'll walk away with actionable strategies and case study examples to apply immediately in your role.

Why this course matters

The global mining sector is undergoing a significant transformation toward decarbonisation, with battery electric vehicles (BEVs) at the core of safer, cleaner, and more efficient operations. This transition isn't just about swapping diesel engines for batteries—it's about rethinking your mine design, operational strategies, workforce training, and compliance practices. This course gives you the strategic vision and technical foundation to lead that change with confidence.

Who should enrol?

AusIMM Courses are open to all, with no formal prerequisites; however, this course is ideally suited to professionals involved in mine planning, operations, safety, or strategic transformation, including:

- Mine-site managers, operations supervisors and corporate leaders driving decarbonisation
- Engineers, planners and early-career professionals involved in mine design and fleet integration
- Safety, compliance and emergency response teams ensuring regulatory readiness and risk mitigation
- Procurement specialists and consultants supporting feasibility, technology adoption, and investment decisions

Whether you're leading change or supporting it, this course equips you with the tools to navigate the transition to mine electrification.



PD hours

20 hours



Delivery

100% online



Duration

5 weeks



Certificate

Digital credential

Pricing

Member \$1,491

Non-member \$1,940

Membership bundle \$1,747

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

Discounts available when 3 or more participants book together.

Scan for more
information

ENROL NOW



What you'll learn

For mine site managers and operational leaders:

- Develop a BEV integration strategy that includes maintenance, safety, workforce training, supply chains, and risk assessments.
- Implement organisational change management techniques to drive cultural and process transformation.

For early-career professionals and engineers:

- Learn the hands-on essentials of trialling and integrating BEVs in active operations.
- Understand BEV technology, mine design adaptations, battery infrastructure, and troubleshooting.

For compliance and safety officers:

- Create comprehensive safety and emergency response plans for BEVs.
- Ensure regulatory alignment across training, PPE, and risk mitigation frameworks.

Career outcomes

Whether you're advancing your current role or pivoting into a new one, this course positions you as a leader in one of the mining industry's most critical innovation areas:

- **Operational Strategist:** Lead fleet transformation projects and electrification strategy.
- **Mine Design Innovator:** Adapt underground and surface mine plans to accommodate electric fleets.
- **Compliance and Safety Specialist:** Ensure alignment with evolving safety regulations.
- **Sustainability Champion:** Contribute meaningfully to ESG goals and decarbonisation mandates.
- **Technical Advisor or Consultant:** Support decision-making for BEV implementation and feasibility.

Organisational benefits

For mining companies looking to reduce emissions, enhance safety, and remain competitive, this course delivers immediate value:

- Accelerate your decarbonisation roadmap with informed decision-makers across teams.
- Improve site safety and compliance through upskilled personnel and risk-informed planning.
- Reduce downtime and transition costs with proactive trialling and troubleshooting practices.
- Strengthen cross-functional collaboration between operations, compliance, and technical teams.
- Future-proof your workforce to meet upcoming technology and regulatory demands.

Facilitators

All courses have been developed by industry for industry. See full facilitator profiles on our course page.



David Lyon

Founder and President of
Zero Nexus



Edward Fagan

Associate Partner,
Zero Nexus

Get ahead of the curve and lead with confidence

This course will give you the strategic insight, technical know-how, and practical tools to drive real change as the mining industry moves rapidly toward electrification.

Join the leaders electrifying mining and enrol today.

ENROL NOW



Mine Electrification modules

1

Introduction to mine electrification

This module describes the drivers of electrification in mining, the main technologies underlying this transition, the benefits and challenges BEVs bring to mining and the regulatory landscape.

Topics covered:

1. Overview of Mining Electrification
2. The BEV Technology Landscape
3. Benefits of BEVs in Mine Electrification
4. Challenges of BEV's in Mine Electrification

2

BEV technology in mining operations

This module explains the core components and systems behind BEV technology and how to integrate BEVs into mine plans, supported by case studies.

Topics covered:

1. Key components in BEV technology
2. BEV Infrastructure and Human Capital
3. Integrating BEVs into Mining Operations
4. Mine Design Changes for BEVs
5. Case Studies on Trialing new BEVs

3

Battery technology and safety

This module covers the fundamentals of lithium-ion battery technology and the key safety considerations for safe handling, maintenance and management of batteries over their lifetime.

Topics covered:

1. Fundamentals of Battery Technology
2. Introduction to Lithium-Ion Battery Safety
3. Battery Handling and Maintenance
4. Risk Management & Emergency Preparedness
5. Battery Lifecycle Management

4

Change mapping and strategic planning

This module provides a structured approach to building the business case for BEVs in mining, estimating the financial impacts of the innovation and planning/managing the change process.

Topics covered:

1. BEV Business Case Development
2. Fleet Costs and Financing
3. Planning and Managing Change
4. Assessing and Managing Risks

Mining is evolving—and so should your skills. Whether you're steering strategy, driving compliance, or applying new technologies on the ground, this course gives you the tools to lead your team and operation into the electric future.

ENROL NOW

