

Sustainable Minerals Institute

Professional development and tailored training
for the minerals and resources sector



CREATE CHANGE



Health, safety, risk and human factors for high-risk industries

The Minerals Institute Safety and Health Centre (MISHC) at The University of Queensland has been working to improve the management of risk, safety and occupational health in the resources industry and other high-risk sectors for over 25 years.

Our professional development programs are grounded in evidence-based research and developed and delivered by leading academics and industry experts as practical and interactive short courses and masterclasses.

They incorporate research outputs, learning from events, and regulatory and international standard requirements to equip organisations with the knowledge and skills to better identify hazards and make effective decisions about risk.

MISHC delivers training across all levels - from frontline workers to executives. Options include public courses, train-the-trainer programs, masterclasses and bespoke training tailored specifically for organisational needs.

MISHC is part of UQ's Sustainable Minerals Institute (SMI)

SMI is a world-leading multidisciplinary research institute committed to addressing the challenges facing the minerals industry and the communities that exist alongside it - now and into the future.

Our track record

- Over 500 professionals participated in MISHC courses and masterclasses in 2025.
- Courses are delivered globally - in person across Australia, Chile, Peru, Canada and Brazil with online participation extending across South America, Africa and New Zealand.
- The MISHC team are working with the Australian Department of Education to develop and support a suite of training programs in Latin America.
- Our courses engage participants from large international companies, medium sized operations, government regulators, small businesses, and regional operators, with content tailored to suit each organisational context.
- MISHC researchers designed and developed the internationally recognised GMIRM suite of risk management and safety training.
- Course content is aligned with ICMM and regulatory standards.
- UQ is consistently ranked in the world's top 5 for mining and minerals research.

"I'd recommend RCCM workshop - the detail in building the risk management process through all stages was logical and easy to understand. If you are looking to build a critical control management plan this is the course for you!"

Adam Rolfe, Site Senior Executive, Compass Group

Key learning areas

Critical risk control & management

Identifying and implementing controls for risks with the potential for fatalities or serious harm, using ICMM guidelines and Bowtie analysis.

Layered risk management

Integrating organisational, team, and task-based risk assessments to create a coherent risk control framework.

Health and safety management systems

Designing, implementing, and evaluating management systems that meet regulatory requirements and drive performance improvement.

Frontline risk assessment tools

Improving the quality and effectiveness of Take 5s, SLAMs, and other point-of-task tools to better manage hazards in the field.

Human factors

Focusing on the human aspects of automation; human-systems integration; hazard recognition enhancement and assessment; designing for diversity and inclusion; and worker-centred design of safer, healthier and more attractive work.

Incident investigation and learning

Applying best-practice investigation methods to learn from incidents and prevent recurrence.

Emerging technologies and data analytics

Leveraging data, analytics, and artificial intelligence to enhance risk decision-making and control.

Customised in-house training solutions

Based on listed courses but reference materials, case studies, exercises and course duration are tailored to the audience. Contact us to discuss your needs: mishc.education.smi@uq.edu.au

“Invaluable information. Thought provoking. The Bowtie Facilitation Workshop gave me a greater knowledge of Bowtie process and ability to have a go at facilitating my first Bowtie next week.”

Simon Tanner, Safety Officer, Anglo American MNM Bowtie

Course list

Course name	Target audience	Aim	Duration	Accreditation
G3: GMIRM Risk Management Systems for Managers	Operations site managers, risk and control owners and technical specialist staff	Improve understanding and practice of risk and critical control management within hazardous operational contexts.	4 day workshop	People seeking RIIRIS601E apply for RPL through UQ Skills (RTO #1511)
G7: Mine Occupational Health and Safety Management	Operations site managers, risk and control owners and technical specialist staff	Deliver the skills and knowledge to develop, implement, evaluate and manage occupational health and safety management systems within hazardous operational contexts.	4 day workshop	Competency mapping against RIWHS601E and BSBWHS411 Future accreditation of RIWHS601E, BSBWHS521 and BSBWHS411 by applying for RPL through UQ Skills (RTO #1511)
G2: Risk Management for Supervisors	Frontline supervisors and support personnel	Advance knowledge and experience with the application, review and supervision of frontline risk assessment and risk control activities.	2 day workshop	People seeking RIIRIS402E, RIIRIS301E apply for RPL through UQ Skills (RTO #1511)
Bowtie Facilitation Workshop	Those involved in facilitating or owning/ critiquing risk assessments and Bowtie analyses	Prepare experienced risk management personnel to facilitate effective Bowtie workshops within their organisation.	3 day workshop	
Safety Investigation and Analysis Management	Operations site managers, safety and environmental specialists and technical support staff	Increase understanding of the principles and practice of effective incident investigation, and how to achieve better system safety.	4 day workshop	Competency mapping against RIWHS301E Future accreditation of RIWHS301E by applying for RPL through UQ Skills (RTO #1511)

Course name	Target audience	Aim	Duration	Accreditation
Safety Investigation for Supervisors	Frontline supervisors and support personnel	Application and effective investigation techniques linked with organisational risk assessment processes that generate meaningful corrective actions and sustainable system improvements.	2 day workshop	Competency mapping against RIIWHS301E Future accreditation of RIIWHS301E by applying for RPL through UQ Skills (RTO #1511)
Process and Systems Safety Engineering	Those interested in understanding leading approaches for assessing or managing major hazards and risks that can threaten the safe operation of complex industrial processing operations	Advances knowledge of process safety and systems safety engineering principles and practices, and how to leverage them to achieve better system safety.	4 day workshop	
Risk and Critical Control Management	Personnel requiring introductory or refresher competencies for the management and reporting of risks, controls, and control support activities	Increase understanding of risk management and critical control systems with insights from the latest applied research.	1 day workshop or 8-weeks self-paced online course	Refresher for G3: GMIRM Risk Management Systems for Managers
Introduction to Human Factors and Human-Centred Design	Those interested in learning about human factors and how these approaches can be leveraged to improve both worker wellbeing and overall organisational performance	An introduction to the field of human factors as it relates to mining, and an awareness of key considerations, issues and approaches.	1 day workshop	

Masterclasses and forums

Course name	Aim	Duration
Advanced Data Analytics and AI Masterclass	Develop advanced data analytical tools and explore the impact that AI can have by using predictive models to make our workplaces safer.	2 days
Critical Risk Control Masterclass	Advance critical control management skills to prevent fatalities.	2 days
Dust and Respiratory Health Forum	Bring together researchers, industry, regulators, and unions to share the latest advancements in dust monitoring, control, and health outcomes.	1 day

Delivery

MISHC courses are delivered at The University of Queensland's St Lucia campus in Brisbane, in regional areas or privately on site. Masterclasses are delivered online and in-person.

On completion attendees receive

- UQ digital certificate of attendance or completion of the course and CPD points
- Access to MISHC online community

“G3 GMIRM course is a game changer for anyone interested in self-development within the safety space, very informative and relevant to industry.”

Joshua Rackemann, Electrical & Instrument Superintendent, Harmony Gold

To enquire about private bookings or bespoke training, please contact the Education team.

Contact us

MISHC Professional Development

E mishc.education.smi@uq.edu.au

W smi.uq.edu.au/professional-development/health-safety-risk

Explore the Sustainable Minerals Institute's full suite of professional development courses across social responsibility, environmental management and geometallurgy and process innovation at smi.uq.edu.au/professional-development



Please see the website for the current calendar and location of upcoming courses.

“GMIRM G3 gives managers a more holistic appreciation of safety risk assessment and management approaches.”

Kym Mosey, Mining Superintendent,
Tomingley Gold Operations

“The workshop was an excellent introduction to Bowtie facilitation. I gained great understanding of how to manage large groups of Bowtie conversations.”

Debasish Sarma, Principal Operations Integrity Lead,
Urban Utilities

“I wanted to express my appreciation for all the excellent work put into running a successful Critical Risk Control Masterclass... I found all the sessions informative, challenging and on point. The range and diversity of the speakers was excellent, and the range of participants both in the room and online is a credit to your program and work.”

Michelle Tracey, Project Director, MWTPProjects

