RESPONSIBLE RESOURCE DEVELOPMENT

GRADUATE CERTIFICATE
GRADUATE DIPLOMA
MASTER DEGREE
CONTINUING PROFESSIONAL EDUCATION
Reducing the fatality rate by 63% on mine sites over four years

More than 200 community relations professionals trained for global roles

Increasing viability of low grade material by 20%

Reducing freshwater consumption by up to 75%

Hundreds of millions of dollars in value in process efficiencies

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SMI’s IMPACT

PROFESSOR CHRIS MORAN
Director, Sustainable Minerals Institute

The Sustainable Minerals Institute (SMI) is a unique collection of staff and students working in discipline-based research centres covering the life-of-mine and its social and environmental contexts. Increasingly my role is to integrate the Institute’s unique multidisciplinary talents to provide collaborative solutions to problems facing the mining industry.

The Institute defines the mining value chain, the life cycle, regions, and information movement as the key integrating dimensions for sustainability. SMI aspires to demonstrate to our stakeholders a journey where improved processes and integration will lead to better business and societal outcomes.

SMI has a strong track record of education and professional development activities, delivering into undergraduate and postgraduate coursework programs for over 10 years.

In 2015 SMI is proud to launch its new suite of graduate programs in the field of Responsible Resource Development. This initiative is being launched at a time when the mining industry faces the critical challenge of continuing to improve its sustainability performance while operating under significant financial constraints.

The unique structure of this graduate program gives students a firm foundation of sustainable development principles, while offering flexibility to gain specialised knowledge in a nominated thematic area.

The program will be built around common core courses, engaging directly with the sustainable development agenda at both the Graduate Certificate and Diploma level. Students will be able to specialise in one of three thematic areas: environment, health and safety and community relations, with the opportunity to build cross-discipline knowledge at the Graduate Diploma level. Students who progress to the Master will work with our leading researchers and contribute to SMI’s world-class research program.

Benefits to students who undertake this unique program include:

- in-depth understanding of sustainability and its role in the extractives industry;
- development of higher order skill sets in problem solving, effective communication, project management and teamwork, as well as discipline-specific expertise;
- exposure to Australian and global industry experts; and
- access to courses delivered in flexible and intensive modes, providing face time with lecturers through online webinars and periodic campus workshops.

Integrated systems thinking about sustainability is part of the DNA of SMI and we would like to help make it a part of yours.
To help meet the changing professional training and development needs of the extractive resources sector, the **Responsible Resource Development** program will be built around two common core courses, engaging directly with the sustainable development agenda at both the **Graduate Certificate** and **Graduate Diploma** level. The program structure will give students the opportunity to take further courses in one of three thematic areas: environment, health and safety, and community relations. Students continuing to the **Master Degree** level will complete their program with a supervised thesis.

**CORE COURSES**

**SUSTAINABLE DEVELOPMENT IN THE MINERALS INDUSTRY CONTEXT**

This introductory course is a requirement for all students undertaking the **Graduate Certificate** program.

The course covers history of sustainable development, the industry responses to the sustainable development agenda and the Five Capitals Framework. The course will also include an introduction to the three fields of specialisation: community relations, environment, and health and safety.

To complement the online nature of this course, there will be a five day intensive held at UQ’s St Lucia in Brisbane during the first semester. Travel and accommodation costs and arrangements are the responsibility of the student.

**SUSTAINABLE DEVELOPMENT IN THE MINERALS INDUSTRY – TOOLS AND INTEGRATION**

This course will be a requirement for students enrolled in the **Graduate Diploma** program.

Building on the foundation of ‘Sustainable Development in the Minerals Industry Context’, this course will introduce students to a range of tools and frameworks that can be used to inform sustainability thinking and practice.

The course will examine the connectivity and pathways that these tools provide across the range of SMI’s ‘disciplines’ and their integration into, and practical use, when applied to the sustainability challenges facing the global minerals industry.

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**WHAT’S NEXT?**

**Innovation through connection**

The Institute is working towards building solutions to industry challenges through the strategic research initiative NextMine™ and the complementary education program NextWorkforce. These initiatives will support the development of a more integrated, knowledge-driven approach to planning, managing and closing mines and meeting society’s demand for minerals.
The Centre for Social Responsibility in Mining has an international reputation for delivering Community Relations education and professional development for the global resource industry.

The program involves leading academics and industry practitioners from the global resources sector, and covers the latest developments in topics relating to resource projects and community relations.

We aim to equip students with knowledge, skills and attitudes that will help them to understand, engage with, and contribute to the development of communities that are impacted by resource extraction and related activities.

COMMUNITY ASPECTS OF RESOURCE DEVELOPMENT develops an understanding of community impacts of resource development, and the knowledge and skills to engage with and contribute to the development of communities impacted by mining, oil and gas industry activities.

COMMUNITY ENGAGEMENT FOR THE RESOURCE INDUSTRY explores a range of community development and community engagement domains, techniques and skills, as they apply to the context of the mining industry.

COMMUNITY DEVELOPMENT FOR THE RESOURCE INDUSTRY introduces a framework for understanding how community development theory, methods and techniques can be used by community relations workers.

EVALUATING SOCIAL PROGRAMS introduces concepts and skills to plan and conduct evaluations of social programs.

REGIONAL AND LOCAL ECONOMIC DEVELOPMENT FOR THE RESOURCES SECTOR explores community development approaches to local and regional economic development, with a particular focus on the communities and regions associated with the resources sector.

COMMUNITY RESEARCH METHODS FOR THE RESOURCES SECTOR explores a range of social research methods available for those working with mining and other resource-based communities.

Coordinated by the Centre for Social Responsibility in Mining (CSRM), a leading research centre committed to improving the social performance of the resources industry globally, the Community Relations field will provide knowledge and skills relevant to all aspects of the interactions between resource companies and their associated communities. Originally developed in collaboration with the Minerals Council of Australia, this innovative specialisation provides a professionalisation pathway for community relations practitioners and others working with communities in the resources sector.

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Graduate Spotlight

Briony Coleman Master of Community Relations Graduate (2012)

Building on a background in Natural Resource Management, the Master of Community Relations program provided Briony with diversity in skills and knowledge applicable to both the environment and social responsibility fields, as well as with tools to use ‘on the ground’ for her everyday work with key stakeholders. Briony is now based in the western USA as an Environmental Specialist for Newmont Mining Corporation’s Northern Nevada operations.

Since completing the program Briony has been able to implement the tools learned and, coupled with the solid background covered on principles of Corporate Social Responsibility, has been able to successfully create and foster good community relations with a very wide range of members of rural and regional communities in Australia and the USA that are exposed to the mining industry.
Formally established in 1993, the CMLR consists of a collaborative and multi-disciplinary group of research, teaching and support staff and postgraduate students. CMLR is dedicated to delivering excellence in environmental research, education and awareness to the national and international minerals industry, relevant government departments, non-government organisations and local communities on cutting edge issues in mining environmental management and sustainability across the full spectrum of resource commodities.

CMLR has built a reputation for the provision of scientific research that is necessary to support and underpin the decisions that need to be made to minimise the risks and maximise the opportunities resulting from resource exploration, extraction and processing globally.

**ENVIRONMENT COURSES**

**ENVIRONMENTAL MANAGEMENT IN MINING** provides an introduction to the management of environmental impacts associated with mining activities, that must be managed carefully to balance stakeholder expectations with financial cost to the company.

**VEGETATION AND HABITAT REHABILITATION** explores processes important for assessing the success of managed vegetation establishment on disturbed land, and understanding of how these processes are required for rehabilitation of vegetation and wildlife habitat.

**MANAGING POST-MINING LANDSCAPES** examines the major land and water impacts of mining activities, and introduces land rehabilitation concepts specific to the management of sites impacted by mining and processing of ores and energy resources.

**MINE WASTE MANAGEMENT AND LANDFORM DESIGN** provides an in-depth analysis of the physical and chemical characterisation of mine wastes, current rehabilitation philosophies, drainage structures, encapsulation and capping of waste rock and tailings storage facilities, and future land uses.

**WATER MANAGEMENT IN THE MINERALS INDUSTRY** highlights the importance of management of hydrological processes in the Minerals Industry. Water quality examination, local and regional surface and subsurface hydrology, acid mine drainage, requirements for mine lease relinquishment, and monitoring techniques and strategies are covered in depth.

**STUDENT SPOTLIGHT**

**Katie Pitt** Graduate Diploma of Mineral Resources (Environment) 2013-2014

For Katie, the flexible learning options and exceptional academic support offered in her program have been integral to her academic success and career goals to date. The excellent subject range and content relevancy, the subject coordinators providing a stimulating and conducive learning environment no matter what mode of study is undertaken, as well as the opportunity to learn from, and network with industry leaders has been most notable.

Katie commented that you “feel like you are part of a team that is committed to tackling the multi-faceted challenge of sustainable mining, and I know that I am being equipped with the necessary knowledge and skills to make a worthwhile contribution to this cause upon graduation.”
Since 2001, MISHC has been engaged in best practice teaching in risk management education at the postgraduate level. MISHC is unique in the university sector with courses tailored to the specific needs of the minerals industry.

These technically comprehensive programs equip students with an understanding of the concepts and issues connected to minerals industry risk management and the skills to implement good practice in their operations.

The use of current case studies enables students to explore practical mining industry outcomes that can be applied to their own work context, bringing together innovative research and industry knowledge to create safer and healthier working environments.

HEALTH AND SAFETY COURSES

SUSTAINABLE MANAGEMENT OF RISK IN INDUSTRY – AN INTEGRATED SYSTEMS APPROACH covers the principles and application of risk management methods for industry to achieve its objectives and deliver overall system performance improvements across all facets of business from human, technical and commercial perspectives.

MINERALS INDUSTRY RISK MANAGEMENT builds upon the models, tools and systems for applied RM problem solving and decision-making frameworks for major industry hazards and their management. Students who achieve over 75% in ALL assessments will qualify for the equivalent to the RIIRIS601D Establish and Maintain the Risk Management System competency.

MINE OCCUPATIONAL HEALTH & SAFETY MANAGEMENT provides students with the ability to recognise generic mine occupational health and safety hazards and to understand the impact they may have on human health if they are not managed to certain standards. Students who achieve over 75% in ALL assessments qualify for the equivalent to RIIWHS601A Establish and Maintain the WHS Management System, and RIIWHS602D Incorporate Health and Hygiene Factors into Mine Management.

INCIDENT INVESTIGATION AND ANALYSIS is designed to provide a comprehensive understanding of the concepts and issues of an effective framework for incident investigation.

HUMAN FACTORS ENGINEERING will improve awareness of the critical contribution of human factors to the successful design, implementation and risk management in complex systems.

GRADUATE SPOTLIGHT

David Reece Graduate Diploma of Mineral Resources (Minerals Industry Risk Management) Graduate (2013)

As a risk management consultant within the mining industry, the Graduate Diploma has provided David with current, expansive and relevant knowledge that is applicable not only to mining, but to heavy industry in general.

All units of study were detailed and significant but for David, Incident Investigation and Analysis and Mine OHS Management offered a greater level of knowledge than is currently utilised by the industry and can be applied in much more sophisticated contexts. The special projects afforded the opportunity to apply associated learning to practical situations and receive valuable feedback and insight from the course coordinators.
# Suggested Study Plans

## Suggested study plan for Community Relations field

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<thead>
<tr>
<th>SEMESTER 1</th>
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<tbody>
<tr>
<td>Graduate Certificate</td>
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<tr>
<td>Sustainable Development in the Minerals Industry Context (Core Course)</td>
<td>Community Aspects of Resource Development</td>
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<tr>
<td>Community Engagement for the Resource Industry</td>
<td>Community Development for the Resource Industry</td>
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<tr>
<td>Graduate Diploma</td>
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<tr>
<td>Sustainable Development in the Minerals Industry – Tools and Integration (Core Course)</td>
<td>Evaluating Social Programs or approved elective</td>
</tr>
<tr>
<td>Regional and Local Economic Development for the Resources Sector</td>
<td>Community Research Methods for the Resources Sector</td>
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Master Thesis

## Suggested study plan for Environment field

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<tr>
<td>Sustainable Development in the Minerals Industry Context (Core Course)</td>
<td>Managing Post-Mining Landscapes</td>
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<tr>
<td>Environmental Management in Mining</td>
<td>Vegetation and Habitat Rehabilitation</td>
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<tr>
<td>Graduate Diploma</td>
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<tr>
<td>Sustainable Development in the Minerals Industry – Tools and Integration (Core Course)</td>
<td>Water Management in the Minerals Industry</td>
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<tr>
<td>Mine Waste Management and Landform Design</td>
<td>Research Methodologies course as approved by Program Convenor</td>
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Master Thesis

## Suggested study plan for Health and Safety field

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<td>Sustainable Development in the Minerals Industry – Tools and Integration (Core Course)</td>
<td>Incident Investigation and Analysis</td>
</tr>
<tr>
<td>Human Factors Engineering</td>
<td>Research Methodologies course as approved by Program Convenor</td>
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Master Thesis

* These are suggested study plans only and course selection will depend on individual circumstances and course availability. Students who do not declare a major field of specialisation may take a range of courses from across fields to a total number of required units for each award level subject to approval by the Program Convenor.
The Responsible Resource Development program is structured for **part-time study** and delivered primarily online, to accommodate professional learners in full-time employment. This program is not offered on a full-time basis.

Most courses offered into the program take advantage of **best practice teaching and multimedia online delivery**. Each course is run over a standard 13 week university semester and involves approximately 10-15 hours of study per week.

The program will be offered at three award levels:
- Graduate Certificate in Responsible Resource Development
- Graduate Diploma in Responsible Resource Development
- Master of Responsible Resource Development

**HOW TO APPLY**

Admission to the Responsible Resource Development program requires:
- A Bachelor’s degree or equivalent in the same discipline as approved by the Executive Dean with a GPA of at least 5.00 on a 7 point scale and one year full-time work experience in the same discipline as approved by the Executive Dean; or
- A Bachelor’s degree or equivalent with a GPA of at least 5.00 on a 7 point scale and three years full-time work experience in the same discipline as approved by the Executive Dean.
- Industry experience and/or current employment is highly recommended.

To apply, go to [www.uq.edu.au/study/future-students.html](http://www.uq.edu.au/study/future-students.html)

Applications close **January 31**.

**Fees**

For information on fees for domestic and international students, go to the fees calculator at [www.uq.edu.au/study](http://www.uq.edu.au/study). **NOTE: All tuition fees are reviewed on an annual basis and may be subject to change.**

**For further information on admissions to UQ**

**Domestic student enquiries**

To find out more about applications or programs for Australian (domestic) students, call **+61 7 3346 8100** (open 9:00am to 5:00pm from Monday to Friday except university and public holidays).

**International student enquiries**

For further enquiries about applications or programs, international students can call **+61 3 8676 7004** from outside Australia or **1800 671 980** from inside Australia (free call).