MINE8780

Environmental Management for the Mining Industry

Term 1, 2022

Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Simit Raval	simit@unsw.edu.au	On-line via Teams	159 Old Main Building K15 UNSW	+61293855 005

School Contact Information

School of Minerals and Energy Resources
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Engineering Student Services
E: mere.teaching@unsw.edu.au
W: www.engineering.unsw.edu.au/minerals-energy-resources

Course Details

Units of Credit 6

Summary of the Course

This course provides a comprehensive and practical understanding of the impacts both positive and negative that mining may have on society and the environment. On completion of this course, students should be able to identify, analyse and apply state-of-the-art techniques in environmental management of mine sites as well as identify the major issues and management strategies associated with social/community impacts of mining in Australia and internationally.

Participants should gain an appreciation of:

- Global treaties, international environmental law and the role of the UN and World Bank - the big picture
- Sustainability
- Corporate responsibility
- Environmental management tools including EIA and EMS-
- Best practice
- The most significant environmental management issues on mine sites
- Management of these issues.

Course Aims

This course aims to provide a comprehensive and practical understanding of the impacts both positive and negative that mining may have on society and the environment

Course Learning Outcomes

1. Demonstrate a knowledge of the legal, political & ethical context of mining in Australia and overseas.
2. Describe and apply the principles of Sustainable Development.
3. Identify, analyse and apply state of the art techniques in environmental management of mine sites.
4. Identify the major issues and management strategies associated with social/community impacts of mining in Australia and internationally.

Teaching Strategies

There are no face to face lectures for this course. All materials will be available on-line on the Learning & Teaching Management System (LTMS) used with this course.

Learning & Teaching Management System (LTMS): The *Learning & Teaching Management System* (LTMS) used with this course is *Moodle*. Moodle can be accessed at <http://moodle.telt.unsw.edu.au>.

For up to date information on lectures and workshops, see the Calendar section in LTMS and the School Noticeboard. Support material for this course including, copies of lecture notes, recommended readings, assignments and results for assignments etc whenever available can be found in LTMS.

All correspondence should be undertaken using the email facility within LTMS.

Changes in the lecture schedule, seminars, workshops and assignment dates will be posted on the Calendar in LTMS.

It is important that students regularly check LTMS for changes in calendar events and for email messages. It is strongly recommended that students use the mail redirection facility to forward LTMS emails to their usual email address.

Assessment

Assessments will be based on online quizzes, online discussion forum, writing blog and a major project work.

Note: Course completion requires that all assessment items be completed.

Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Discussion Forum	18%	Not Applicable	1, 2, 3, 4
2. Quizzes	25%	Not Applicable	1, 2, 3, 4
3. SEAM Blog	26%	Not Applicable	1, 2, 3, 4
4. Environmental Management Plan	31%	Not Applicable	1, 2, 3, 4

Assessment 1: Discussion Forum

Assessment length: Max 300 words/post

Discussion on given topic to be submitted on-line each week from week 1 to week 6

Assessment criteria

- Participated in respective week's discussion before the following week Monday morning 9 AM Sydney time. (0.5 mark)
- The response is concise and provides critical summary (up to 0.5 mark)
- The post is more analytical less informative (up to 0.5 mark)
- The post has excellent logical structure (up to 0.5 mark)
- No spelling mistakes or grammatical errors (up to 0.5 mark)
- Contains supporting facts, references in favour of the presented view (up to 0.5 mark)

Assessment 2: Quizzes

On-line quizzies to test understanding of the material presented to date

Assessment 3: SEAM Blog

2 blog entries (approximately 500 words each) + 2 blog reflections (approximately 1 paragraph)

Assessment 4: Environmental Management Plan

A critique on a selected EMP (Video presentation 5 min, 6% + Final report max 800 words, 25%)

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Course Schedule

The course is offered as a distance course over 7 weeks. There is no face to face classes at the campus. It is recommended that approximately 150 hours is required for satisfactory performance in this course, depending on background and experience. It is the students' responsibility to manage and plan workloads as much as possible to enable a minimum of 8 hours per week, plus time for assessments. Some weeks may require around 35 hours.

[View class timetable](#)

Timetable

Date	Type	Content
O-Week: 7 February - 11 February	Group Activity	Icebreaker activity
Week 1: 14 February - 18 February	Topic	- **Course introduction/expectations** - **What is Sustainable development?** - **International perspectives** - **Legislative context** - **EIA; EMS** - **Risk management (ERM)**
Week 2: 21 February - 25 February	Topic	- **Corporate responsibilities & initiatives** - **Workforce training & awareness** - **Codes of practice; EMPs and other reporting; auditing;** - **Leading Practice Environmental Management (LPEM) – an introduction;** - **Environmental protection during exploration** - **Managing air quality, noise, vibration, lighting etc.** - **Quarrying** - **Uranium mining**
Week 3: 28 February - 4 March	Topic	- **Managing wastes** - **Tailings storage** - **Managing water quality, includes AMD** - **Environmental Monitoring and sampling**
Week 4: 7 March - 11 March	Topic	- **Managing hazardous substances, includes cyanide** - **Mine planning & choice of mining method to avoid environmental impact** - **Environmental issues in Artisanal and**

		Small-scale Mining (ASM)
Week 5: 14 March - 18 March	Topic	• **Biodiversity offsetting** • **Mine closure** • **Derelict mines**
Week 6: 21 March - 25 March	Topic	• **Social and community impact** • **Principles** • **Australian experience** • **International experience**
Week 7: 28 March - 1 April	Topic	• **Mining in a global environment** • **Off-earth mining: environmental considerations** • **Complete the assessment and provide course feedback**

Resources

Prescribed Resources

Support material for this course including, whenever available, copies of lecture notes, recommended readings, etc. can be found on Moodle.

Recommended Resources

Leading Practice Handbooks for sustainable mining

Submission of Assessment Tasks

The School has developed a guideline to help you when submitting a course assignment.

We encourage you to retain a copy of every assignment submitted for assessment for your own record either in hardcopy or electronic form.

All assessments must have an assessment cover sheet attached.

Course completion

Course completion requires submission of all assessment items. Failure to submit all assessment items may result in the award of an Unsatisfactory Failure (UF) grade for the Course unless special consideration has been submitted and approved. Please note, a competency hurdle of 50% is applied to the final assessment.

Late Submission of an Assignment

Full marks for an assignment are only possible when an assignment is received by the due date.

We understand that at times you may not be able to submit an assignment on time, and the School will accommodate any fair and reasonable extension. We would recommend you review the UNSW Special Consideration guidelines – see section below.

Late submission will not be accepted and will be considered as no submission.

Special Consideration

You can apply for special consideration through The Nucleus Student Hub when illness or other circumstances interfere with your assessment performance. Sickness, misadventure or other circumstances beyond your control may:

- Prevent you from completing a course requirement
- Keep you from attending an assessable activity
- Stop you submitting assessable work for a course
- Significantly affect your performance in assessable work, be it a formal end-of-semester examination, a class test, a laboratory test, a seminar presentation or any other form of assessment

We ask that you please contact the Course Convenor immediately once you have completed the special consideration application, no later than one week from submission.

More details on special consideration can be found at: www.student.unsw.edu.au/special-consideration

Student Support

The University and the Faculty provide a wide range of support services for students, including:

- Library training and support services - www.library.unsw.edu.au

- UNSW Learning Centre - www.lc.unsw.edu.au
- Counselling support - www.counselling.unsw.edu.au

Equitable Learning Services aims to provide all students with a free and confidential service that provides practical support to ensure that your health condition doesn't adversely affect your studies. https://student.unsw.edu.au/els

Academic Honesty and Plagiarism

Your lecturer and the University will expect your submitted assignments are truly your own work. UNSW has very clear guidelines on what plagiarism is and how to avoid it. Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. The University has adopted an educative approach to plagiarism and has developed a range of resources to support students. All the details on plagiarism, including some useful resources, can be found at www.student.unsw.edu.au/plagiarism.

All Mining Engineering students are required to complete a student declaration for academic integrity which is outlined in the assignment cover sheets. By signing this declaration, you agree that your work is your own original work.

If you need some additional support with your writing skills, please contact the Learning Centre or view some of the resources on their website: www.lc.unsw.edu.au. The Learning Centre is designed to help you improve your academic writing and communication skills. Some students use the Centre services because they are finding their assignments a challenge, others because they want to improve an already successful academic performance.

Academic Information

Course Results

For details on UNSW assessment policy, please visit: www.student.unsw.edu.au/assessment

In some instances your final course result may be withheld and not released on the UNSW planned date. This is indicated by a course grade result of either:

- LE – indicates you have not completed one or more items of assessment; or
- WD – indicates there is an issue with one or more assignment; or
- WC – which indicates you have applied for Special Consideration due to illness or misadventure and the course results have not been finalised.

In either event it would be your responsibility to contact the Course Convener as soon as practicable but no later than five (5) days after release of the course result. If you don't contact the convener on time, you may be required to re-submit an assignment or re-sit the final exam and may result in you failing the course. You would also have a NC (course not completed) mark on your transcript and would need to re-enroll in the course.

Studying a course in the School of Minerals and Energy Resources Engineering at UNSW

Report writing guide

The School has a Report Writing Guide (RWG) available. A copy of this is available on the course Moodle site.

Computing Resources and Internet Access Requirements

UNSW Minerals and Energy Resources Engineering provides blended learning using the on-line Moodle LMS (Learning Management System). Also see - Transitioning to Online Learning: www.covid19studyonline.unsw.edu.au

It is essential that you have access to a PC or notebook computer. Mobile devices such as smart phones and tablets may compliment learning, but access to a PC or notebook computer is also required. Note that some specialist engineering software is not available for Mac computers.

- Mining Engineering Students: OMB G48
- Petroleum Engineering Students: TETB LG34 & LG 35

It is recommended that you have regular internet access to participate in forum discussion and group work. To run Moodle most effectively, you should have:

- broadband connection (256 kbit/sec or faster)
- ability to view streaming video (high or low definition UNSW TV options)

More information about system requirements is available at www.student.unsw.edu.au/moodle-system-requirements

Accessing Course Materials Through Moodle

Course outlines, support materials are uploaded to Moodle, the university standard Learning Management System (**LMS**). In addition, on-line assignment submissions are made using the assignment dropbox facility provided in Moodle. All enrolled students are automatically included in Moodle for each course. To access these documents and other course resources, please visit: www.moodle.telt.unsw.edu.au

How We Contact You

At times, the School or your course convenors may need to contact you about your course or your enrolment. Your course convenors will use the email function within Moodle or we will contact you on your @student.unsw.edu.au email address.

We understand that you may have an existing email account and would prefer for your UNSW emails to be redirected to your preferred account. Please see instructions on how to redirect your UNSW emails: "How can I forward my emails to another account?"

How You Can Contact Us

We are always ready to assist you with your inquiries. To ensure your question is directed to the correct person, please use the email address below for:

- Enrolment or other admin questions regarding your program: https://unswinsight.microsoftcrmportals.com/web-forms/
- Course inquiries should be directed to the Course Convenor

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Acknowledgement of Country

We acknowledge the Bedegal people who are the traditional custodians of the lands on which UNSW Kensington campus is located.