MINE4910
Mining in a Global Environment
Session One, 2016

Dr. Simit Raval
E: simit@unsw.edu.au
1. INFORMATION ABOUT THE COURSE

<table>
<thead>
<tr>
<th>Course Code:</th>
<th>MINE4910</th>
<th>Semester:</th>
<th>S1, 2016</th>
<th>Level:</th>
<th>UG</th>
<th>Units/Credits:</th>
<th>6 UOC</th>
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<tbody>
<tr>
<td>Course Name:</td>
<td>Mining in a Global Environment</td>
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Course Convener: **Dr. Simit Raval**

Contact Details
School of Mining Engineering
Old Main Building, Rm 163

EMAIL: simit@unsw.edu.au
Phone: +61 2 9385 5005

Contact times
- Wednesday 10:00am – 2:00pm, Tyree Energy Technology G17 (K-H6)
- Check Section 4.2 of this course outline for timings of AVIE sessions held at Old Main Lv1 157

1.1. Course Description

This course provides students with the tools necessary to meet the challenges of working for mining companies as mining engineers and managers in an international (and/or remote Australian) setting. The focus will be on developing countries and an aim will be to draw comparisons between the Australian and international contexts. The course will draw extensively on case studies. It will provide an international perspective of mining; governance and regulatory frameworks; financing; mining companies as agents of change; cross-cultural management; gender; small-scale mining; indigenous communities; community engagement; the resource curse; and climate change impacts on mining.

1.2. Course Completion

Course completion requires submission of all assessment items; failure to submit all assessment items will result in the award of an Unsatisfactory Failure (UF) grade for the Course.

1.3. Assumed Knowledge

This course assumes that students have attained a certain level of maturity to enable them to understand the issues involved. It will be thus suitable for final year mining engineering students. Students should have completed MINE3910 Socio-Environmental Aspects of Mining.
2. AIMS, LEARNING OUTCOMES AND GRADUATE ATTRIBUTES

2.1. Course Aims

This course aims to provide students with the tools necessary to meet the challenges of working for mining companies as mining engineers and managers in an international setting.

2.2. Learning Outcomes

At the conclusion of this course, it is intended that students will be able to demonstrate an understanding of:

1. Legal, political and cultural contexts of mining in international locations;
2. The application of sustainable mining practices to mining globally;
3. The global impacts of mining coal, uranium, gold, copper, nickel and other significant commodities;
4. Cross cultural issues;
5. Issues affecting mining engineers working for mining companies operating in developing countries.

2.3. BE (Hons) Program Learning Outcomes

1. Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline.
2. Application of systematic approaches to the conduct and management of engineering projects.
3. Ethical conduct and professional accountability.
4. Effective oral and written communication in professional and lay domains.
5. Creative, innovative and pro-active demeanour.
6. Professional use and management of information.
7. Orderly management of self and professional conduct.
8. Effective team membership and team leadership.

2.4. Graduate Attributes

This course will contribute to the development of the following Graduate Attributes:

1. understanding of their discipline in its interdisciplinary context
2. rigorous in their analysis, critique, and reflection
3. able to apply their knowledge and skills to solving problems
4. ethical practitioners
5. capable of effective communication
6. information literate
7. digitally literate
8. capable of initiating as well as embracing change
9. collaborative team workers
10. capable of independent, self-directed practice
11. capable of lifelong learning
12. capable of operating within an agreed Code of Practice
13. capable of applying their discipline in local, national and international contexts
14. culturally aware and capable of respecting diversity and acting in socially just/responsible ways
15. capable of environmental responsibility
16. having HSEC consciousness
17. awareness of sustainability, multi-cultural and global issue
3. REFERENCE RESOURCES

3.1. Reference Materials

Support material for this course including copies of lecture PPTs, recommended readings, assignments etc. can be found on Moodle, as made available during the semester. All correspondence with students and any information regarding changes in the lecture schedule and assignment dates will be done through Moodle. All assignments must be submitted through Moodle. It is important that students regularly check Moodle for changes in calendar events and for messages.

3.2. Other Resources

- *MEA Report Writing Guide for Mining Engineers*. P Hagan and P Mort (Mining Education Australia (MEA)). (Latest edition available for download from the School website or a hardcopy version is available from the UNSW Bookshop)

3.3. Online Resources

There are no set textbooks for this course. Students will be expected to research topics and case studies in depth through various media including academic and professional journals, academic books, news media, current affairs programs, documentaries, the internet etc.
4. COURSE CONTENT AND LEARNING ACTIVITIES

4.1 Course Content

This course will require an evaluation and application of at least the following topics:

- International perspectives on mining globally;
- Governance issues in developing countries;
- Financing international mining projects – roles of government & private banks – Equator Principles;
- The role, responsibilities and influence of major mining companies in developing countries;
- Small scale mining – importance and role with respect to large companies:
  - Blood diamonds – blood gold – Kimberley process;
- Cross cultural management – theory and practice;
- Environmental economics – e.g. resource rich v resource poor countries – the resource curse;
- Social impact of mining on women - gender and the mining industry;
- Principles of community engagement in international settings; and
- Climate change and implications.
## 4.2 Learning Activities Summary

<table>
<thead>
<tr>
<th>Wk</th>
<th>Date</th>
<th>Activity</th>
<th>Hrs</th>
<th>Content</th>
<th>Presenter</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Lecture</td>
<td>2</td>
<td>- Course Introduction</td>
<td>SR</td>
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<td></td>
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<td>- Mining and sustainable development</td>
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<td>- International perspectives on mining</td>
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<td>- The role of the UN treaties and summits</td>
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<td></td>
<td>02/03</td>
<td>VR Group 1</td>
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<td>VR Group 1 ONLY - Assignment 2 – Ranger Mine - Virtual Reality Interactive Module Session (Part 1)</td>
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<tr>
<td></td>
<td></td>
<td>Lecture</td>
<td>2</td>
<td>Governance issues in developing countries</td>
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<td>Comparison of mining law internationally</td>
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<td>09/03</td>
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<td></td>
<td>Lecture</td>
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<td>Financing international mining projects</td>
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<td>Roles of government &amp; private banks</td>
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<td>Equator Principles</td>
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<td>16/03</td>
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<td>VR Group 3 ONLY - Assignment 2 – Ranger Mine - Virtual Reality Interactive Module Session (Part 1)</td>
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<td></td>
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<td>Lecture</td>
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<td>Examples of leading practice in community engagement for global mining operations.</td>
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<td>Principles of community engagement</td>
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<td>The role of NGOs</td>
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<td>23/03</td>
<td>VR Group 4</td>
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<td>Lecture &amp; Presentations</td>
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<td>- Country case study in-class presentations</td>
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<td>- Small scale and artisanal mining – significance and role with respect to large operations.</td>
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<td>- Blood diamonds – blood gold – Kimberley process.</td>
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<td>- Managing in different cultures</td>
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<td>09/03</td>
<td>VR Group 2</td>
<td>2</td>
<td>VR Group 2 ONLY - Assignment 2 – Ranger Mine - Virtual Reality Interactive Module Session (Part 2)</td>
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<td>- Country case study in-class presentations</td>
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<td>- Social impact of mining in women.</td>
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<td>- Gender and the mining industry.</td>
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<td>16/03</td>
<td>VR Group 3</td>
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<td>- Environmental and economic considerations. The resource curse?</td>
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<td></td>
<td>23/03</td>
<td>VR Group 4</td>
<td>2</td>
<td>VR Group 4 ONLY - Assignment 2 – Ranger Mine - Virtual Reality Interactive Module Session (Part 2)</td>
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<td>Lecture &amp; Presentations</td>
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<td>- Country case study in-class presentations</td>
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<td>- Climate change impacts</td>
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<td>- Mining operation adaptation</td>
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<td></td>
<td>04/05</td>
<td>VR Final Presentations</td>
<td>4</td>
<td>ALL VR Groups 1-4 - Assignment 2 – Ranger Mine Final Class Presentations in AVIE</td>
<td>SR</td>
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<td></td>
<td></td>
<td>Lecture</td>
<td>2</td>
<td>Mining experiences in Ghanaian Environment</td>
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<td></td>
<td>VR Final Presentations</td>
<td>2</td>
<td>Reserve day for remaining (if any) VR Final Presentations</td>
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<tr>
<td></td>
<td>11/06</td>
<td>Quiz</td>
<td>2</td>
<td>In class Quiz</td>
<td>SR</td>
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### Notes:
- The Course Week does not always align with the Semester Week.
- The above schedule is a guide only and the indicated dates and course content is subject to change without notice.
## 5. COURSE ASSESSMENT

### 5.1 Assessment Summary

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Due date</th>
<th>Release date</th>
<th>Weight (%)</th>
<th>Assessment</th>
<th>Learning outcomes assessed</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>• In-class Presentations: week 5 through to week 9&lt;br&gt; • Written assignment: 9am 11 April</td>
<td>02/03</td>
<td>40</td>
<td>Country Risk Case Study&lt;br&gt;Individual written assignment and in-class presentation during semester</td>
<td>1, 2, 3, 4</td>
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<tr>
<td>2</td>
<td>• Written assignment: 9am 16 May&lt;br&gt; • Group Presentation: 18 May (10am -2pm)</td>
<td>02/03</td>
<td>30</td>
<td>Mining in a Sensitive Environment&lt;br&gt;Group written assignment and in-class presentation</td>
<td>1, 2, 3</td>
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<tr>
<td>3</td>
<td>1 June</td>
<td>30</td>
<td></td>
<td>In-class Quiz&lt;br&gt;A blend of short and descriptive questions to test the understanding of the material presented till date</td>
<td>1, 2, 3, 4</td>
</tr>
</tbody>
</table>

All the course materials and assignments will be available online through Moodle. Access to the Moodle site is via the Moodle icon on the MyUNSW homepage.

### 3.4. Assessment Requirements

- There is no provision to substitute the in-class activities assignments.
- Prior to submission, students should read the School Policy on Assignment Submissions which can be viewed at: [www.mining.unsw.edu.au/information-about/our-school/policies-procedures-guidelines](http://www.mining.unsw.edu.au/information-about/our-school/policies-procedures-guidelines).
- In particular, the student should make sure they have read and understood the:
  - Declaration of Academic Integrity;
  - Assignment Submission requirements detailed in the University Policies section of the Course Outline; and
  - School Policy on Assignment Submission available on the School's website (the web address is given in the Course Outline).
- Submissions must be made electronically through Turnitin in the LTMS unless otherwise stated. Turnitin is a plagiarism checking service that will retain a copy of the assessment item on its database for the purpose of future plagiarism checking.
6. ASSESSMENT CRITERIA

The assessment criteria provide a framework for you to assess your own work before formally submitting major assignments to your facilitator. Your facilitator will be using this framework to assess your work and as a way to assess whether you have met the listed learning outcomes and the graduate attributes for your program. We ask that you don’t use the assessment criteria guidelines as a checklist, but as a tool to assess the quality of your work. Your facilitator will also be looking at the quality, creativity and the presentation of your written assignment as they review the framework. Rubrics, wherever applicable, will be provided at the time of the assignment release.

7. STUDYING A UG COURSE IN MINING ENGINEERING AT UNSW

7.1 How We Contact You

At times, the School or your lecturers may need to contact you about your course or your enrolment. Your lecturers will use the email function through 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 these instructions on how to redirect your UNSW emails: www.it.unsw.edu.au/students/zmail/redirect_external.html

7.2 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: mining@unsw.edu.au
Course inquiries: these should be directed to the course convenor.

7.3 Computing Resources and Internet Access Requirements

UNSW Mining Engineering provides blended learning using the on-line Moodle LMS (Learning Management System).

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.

You can access the School’s computer laboratory in-line with the School laboratory access guidelines and Class bookings.

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)
- Chrome browser or FireFox
- ability to view streaming video (high or low definition UNSW The Box options)

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

7.4 Accessing Course Materials through Moodle

Course outlines and support materials are uploaded on a Learning Management System (LMS) - Moodle. All enrolled students are automatically included on the Moodle for each course. To access these documents, please visit: www.moodle.telt.unsw.edu.au
7.5 Assignment Submissions

The School has developed a guideline to help you when submitting a course assignment. Please take a closer look at all these details on our website: www.engineering.unsw.edu.au/mining-engineering/assignment-submission-policy

We encourage you to retain a copy of every assignment submitted for assessment for your own record either in hardcopy or electronic form. On a rare occasion, assignments may be mislaid and we may contact you to re-submit your assignment.

7.6 Late Submission of an Assignment

Full marks for an assignment are only possible when an assignment is received by the due date. In fairness to those students who do meet the assignment due date and time, deductions will apply to submissions made after this time. Details on deductions that are automatically applied to late submissions are available on our webpage: http://www.engineering.unsw.edu.au/mining-engineering/late-submissions

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 as soon as possible: https://student.unsw.edu.au/special-consideration

7.7 Course Results

For details on UNSW assessment policy, please visit: https://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:

- WD – which usually indicates you have not completed one or more items of assessment or there is an issue with one or more assignment;
- 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.

7.8 Special Consideration

You can apply for special consideration through UNSW Student Central 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: https://www.student.unsw.edu.au/special-consideration
7.9 Students Needing Additional Support

The Student Equity and Disabilities Unit (SEADU) aims to provide all students with support and professional advice when circumstances may prevent students from achieving a successful university education. Take a look at their webpage: http://www.studentequity.unsw.edu.au/

7.10 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 https://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: http://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.

7.11 Report Writing Guide for Mining Engineers


7.12 Continual Course Improvement

At the end of each course, all students will have the opportunity to complete a course evaluation form. These anonymous surveys help us understand your views of the course, your lecturers and the course materials. We are continuously improving our courses based on student feedback, and your perspective is valuable.

We also encourage all students to share any feedback they have any time during the course – if you have a concern, please contact us immediately.