



THE UNIVERSITY OF  
NEW SOUTH WALES

**SCHOOL OF MINING ENGINEERING**

COURSE OUTLINE

GENE7801

**ENERGY AND MINERAL RESOURCES:  
USE OR ABUSE?**

SEMESTER 2 2009

# CONTENTS

	<b>Page</b>
Course staff	3
Course Information	3
Assessment	5
Academic honesty and plagiarism	6
Course schedule	6
Resources for students	7
Continual course improvement	7
Administrative matters	7

## COURSE OUTLINE CONTENT DETAILS

### Course staff:

Dr Chris Daly – Course convenor  
Room 36 School of Mining Engineering, Old Main Building  
Email: [C.Daly@unsw.edu.au](mailto:C.Daly@unsw.edu.au)  
Phone: 9385 4514

### Course information

This is a 3 Unit of credit General Education Course which adheres to the original **Objectives of the General Education Program**:

*The General Education Program at UNSW intends to broaden students' understanding of the environment in which they live and work and to enhance their skills of critical analysis. Above all, UNSW's General Education Program presents students with interesting, challenging and enjoyable opportunities to pursue their own intellectual curiosity.*

*The following objectives were approved by the Council of the University of NSW in December 1994.*

1. To provide a learning environment in which students acquire, develop, and deploy skills of rational thought and critical analysis.
2. To enable students to evaluate arguments and information.
3. To empower students to systematically challenge received traditions of knowledge, beliefs and values.
4. To enable students to acquire skills and competencies, including written and spoken communication skills.
5. To ensure that students examine the purposes and consequences of their education and experience at University, and to foster acceptance of professional and ethical action and the social responsibility of graduates.
6. To foster among students the competence and the confidence to contribute creatively and responsibly to the development of their society.
7. To provide structured opportunities for students from disparate disciplines to interact co-operatively within a learning situation.
8. To provide opportunities for students to explore discipline and paradigm bases other than those of their professional or major disciplinary specialisation through non-specialist subjects offered in those other areas.
9. To provide an environment in which students are able to experience the benefits of moving beyond the knowledge boundaries of a single discipline and explore cross and interdisciplinary connections.
10. To provide a learning environment and teaching methodology in which students can bring the approaches of a number of disciplines to bear on a complex problem or issue.

### Course Structure

The course is offered as an online course only. All course material is available via VISTA, and all assessment submissions are required to be submitted online. There is no face to face contact unless students specifically request it. I am however readily available via email, via the discussion forum and if requested via Chat on Vista.

The course consists of 10 modules which are meant to be studied consecutively and at your own pace. However the Course Calendar will indicate deadlines for submissions of assessable material.

Many of the topics we discuss are also extensively discussed in the media. It is reasonably important that you keep up with what is happening today by say keeping newspaper clippings etc and refer to them in your appropriate assessment tasks. I am quite active in adding current information to the "Virtual Library" found within the Vista course. In addition considerable multimedia resources are available via the site.

### **The modules for this Semester are:**

1. An understanding of what are Mineral and Energy Resources?
2. The Enhanced Greenhouse Effect and Global Warming.
3. Petroleum – sources, uses, environmental concerns and alternatives.
4. Coal: sources, uses, environmental concerns and possible alternatives.
5. Uranium and Nuclear Power as a possible alternative energy source.
6. The future of Uranium Mining to Australia.
7. National Parks, World Heritage – Kakadu.
8. Native Title: Mabo and Wik.
9. Renewable and/or Alternative Energy Sources.
10. Waste Management and the Recycling of Mineral and Energy Resources.

Each module has a brief Learning Outcome described. You should keep this in mind as you read through the material. It is also worthwhile to refer back to the 10 principles of General Education as an extra in terms of Learning Outcomes.

### **Assessment**

#### **1) Assessment rationale**

Why do we need assessment? Basically to provide you with feedback on how well you have understood the topics covered etc and to allow an evaluation of how well you have achieved the intended learning outcomes of this course. I like to think it is “Assessment for Learning” rather than how many marks is it worth? Hopefully the learning aspect is encouraged in this course..... but of course you still need to have a mark on your academic transcript.

#### **2) Individual Assessments:**

**Preview/Postview Assignment: (10% total)** The aim of these 2 assignments is to give an opportunity for students to compare their original expectations of the course etc with the actual outcomes. Students commence courses with some preconceptions/thoughts etc on what it will be about. In this case students often enter the course with strong views on mining and the environment. Others enter the course with no strong views etc but are interested in learning a bit about mining and its impact on the environment, society etc. At the completion of the course the student can reflect on whether the outcomes match what was expected or anticipated.

A representative sample of previews are usually made available to other students via the Discussions to compare expectations and maybe generate discussion on these expectations. Students are encouraged to make Previews available to their peers via the Discussion Forum for comment.

Basically if about of half page of comments, thoughts etc are submitted full marks are received. The Postview is a bit more structured in terms of its requirements and marks are assigned according to the issues addressed. It is not meant to just include whether the course was liked etc.

**The Preview is due during the first week of semester. The Postview is due on the last day of semester.**

**Quizzes: (10 x 3%)** The quizzes consist of factual questions directly related to the Modules and readings from the “Library”. A quiz is available at the end of each Module. The main aims of the quizzes are to encourage students to appreciate the need and use of factual material in a course such as this. A quiz also gives immediate feedback to the student on the level of readings etc being undertaken. A non assessable “Self Test” is also provided which has similar questions to those found in the quizzes. The “Self Test” also includes questions which relate to such important course related issues as “What is plagiarism?” etc. The construction of a quiz is quite difficult and many students have commented that the quiz questions should be more about understanding issues than just facts. One of the assessable tasks described below allows students to develop their own quiz questions to be used in later offerings of this course.

**Discussions: (15%)** Discussions take the place of tutorials in a face-to-face environment or forum. It provides an opportunity for students to present their point of view on a topic, to have it read and commented on by other students, and to read and comment on the points of view of others. Any criticism given or received should be directed to the material rather than to the person. The structure of the forum allows opportunities for students who may not actively participate in a class discussion to contribute their thoughts. Assessment is covered in the Assessment folder but it basically relates to the type of contribution made, ie contributing new thoughts or

commenting on the contribution of others. (It is interesting that the discussions can be sidetracked or cluttered with “chatter” - bit like a noisy tutorial!)

**Letter to the Editor: (15%)** Basically the aim here is to work in a small group to produce an outcome which has group consensus. You must work together to choose a topic for the letter and then work together on the wording to an extent that the final letter is acceptable to all group members because it will “publicly” reflect the views of all members. The approach to assessment is described in the Assessment folder.

**Write your own questions: (15%)** I think one of the difficulties a lecturer or tutor has is writing questions that are relevant to the topic and by answering the question the student gains something in terms of knowledge or understanding. (Questions should not be given to students because they are easy to mark or the student is forced to memorise facts or they are not at all relevant). There are good questions and there are bad questions. (From this exercise you may discover just how difficult it is to develop questions that fit the aims and expected learning outcomes etc of a course). Also from another point of view, by asking a student to develop questions rather than to answer questions, an understanding of issues etc may be achievable from a completely different direction and be as successful, if not more so! Again there is some more information in the Assessment folder. It is a group assignment which promotes allows different views to be expressed on the questions and allows group members see how others interpret the course material etc.

**Major Essay (30%)** The main objective of requiring you to submit a jointly prepared essay is to allow you the opportunity to present your views or thoughts on a particular topic of interest to you in a logical structured manner. It may also help you develop research skills, skills of filtering fact from opinion and writing skills. In addition it will allow you exposure to a ‘Wiki a very simple online collaboration tool. I am assuming you will have read a wide range of commentary on the topics covered here, some of which will have been factual but perhaps the majority will be the opinions of others. For obvious reasons it is essential that you distinguish between fact and opinion on such important topics. The best essays are those that clearly show your opinion justified via fact and fully referenced. They are often written in one “go” as a “piece” of original work that can be quite creative and a pleasure to read. Such a creative work should not be a task to be avoided but rather something one looks forward to. This option also includes some aspect of self assessment which is described in detail in the Assessment folder. The essay is to be submitted to Turnitin to generate a similarity detection report. For this semester you will complete the essay in pairs and use the Writeboard at [www.writeboard.com](http://www.writeboard.com) to prepare your essay and then submit to Turnitin for ease of assessment.

**Additional notes:** As a cover sheet to the essay and contributing up to 5% out of the total of 30% is an option for you to answer the following questions: (I am interested in how students approach essay writing and basically having put time and effort into writing the essay what do you expect in return from the reader/examiner? I am also interested in whether, as a reader, I see the same strengths etc in your essay that you intended.)

- What do you consider to be the best features of your essay?
- How could your essay be improved?
- What aspects of your essay are you most confident/happy about, and why?
- What aspects of your essay are you least confident/happy about, and why?
- What aspect of your would you like me to comment on, give feedback on etc?
- Optional: Can you give me an estimate of what mark /25 you would realistically expect to receive for this essay?
- If you answered this last question - what would you have had to do to get a higher mark? See below.

#### **How the essay is to be assessed? (1500+ words excluding references)**

- 5% Introduction - summary statement on what you are going to do, why choose this topic, summary of your opinions etc - mention its link to mining.
- 10% Body of the essay - how your arguments/opinions are developed and supported - reference to source material
- 5% Conclusion - how it all fits together, how you opinion has been supported, any suggestions final comments etc
- 5% References - how well they are consulted - not necessarily a lot - some recent say at least late 2005 for newspapers etc

(Refer to <http://www.lc.unsw.edu.au/olib.html#Essay> at the UNSW Learning Centre for some great ideas on how to write and reference essays.)

## Current Essay Topics:

To encourage you to write about a topic that interests you instead of me trying to think up interesting(?) essay topics, I suggest the following:

- I have accumulated a range of newspaper articles, commentaries etc which I have placed in “The Library”. After reading though a selection of the articles you could reflect on how the subject of the article could relate positively or negatively on some aspect of mining.
- Use the topic of the article as your essay title or choose a topic that incorporates some of the articles in “The Library”. The essay must have clear relevance to the name of this course and the link clearly described in your introduction. The format of the essay remains the same ie you should do extra reading and list your readings in the Bibliography etc. (see Essay info above)
- Write your essay in the first person ie “I think or in my opinion....”.

I will add new articles as the course “Library” as the course progresses. If you find an interesting media article please post it under Essay discussion topic.

The essay must discuss more than just topics such as “Climate Change” in general – it must show a link or relevance to mining.

## ACADEMIC HONESTY AND PLAGIARISM

Plagiarism is the presentation of the thoughts or work of another as one’s own.

Please ensure you have read through <http://www.lc.unsw.edu.au/plagiarism/pintro.html> as it gives very good overview of Plagiarism.

You may also wish to complete the plagiarism quiz at <http://www.lc.unsw.edu.au/plagiarism/plagquiz.html> which may answer some of your questions.

Basically if you submit material for assessment that I consider plagiarised you will receive 0 for that assessment.

## Course schedule

- This is available electronically – via the Vista Calendar Tool. As students log in you will be able to see the Calendar with due dates for all assignments.

## Schedule for Summer Semester 2008:

- Preview due during the first week of the course.
- Postview due at the end of the last week of the course.
- Quizzes – end of each Module
- Part 4 due see online calendar.
- Essay due see online calendar.

## How to approach this course?

- Read through information across the Vista site.
- Commence working through the Learning Guides.
- As a first stage submit your Preview assignment formally and to the discussion area if you choose. This encourages discussions to commence. Many of the postings are of individuals opinions on various topics and hence are very important in the sense that others opinions may widely differ or be quite similar to yours.
- Next spend some time reading through each of the modules – they form a basis for the logical structure of this course. Read material from the “Library” and watch more of the online videos. Hopefully you will gain factual information as well as a broader range of views on the topics. This can of course be continued on as discussion topics.

- As you become more aware of the issues commence thinking about an essay topic on an area that really interests you and you are willing to do a little more research on.
- Also at an early stage you can make contact with your group members for the Part 4 assessment task and commence working out a strategy for arriving at a topic for the Letter to the Editor etc.
- The quizzes are not meant to be an onerous task – they relate to the factual information you have gained via your readings. Once completed they also give you instant feedback on your progress.

### **Resources for students**

Support material for this course including, when available, copies of lecture notes, recommended readings, assignments and results for assignments etc can be found on Vista at [elearning.unsw.edu.au](http://elearning.unsw.edu.au). All correspondence with students will be done using the internet mail facility within Vista. Changes in the lecture schedule and assignment dates will be posted on the calendar in Vista. It is important that students regularly check Vista for changes in calendar events and for messages. It is strongly recommended that students use the mail redirection facility to forward Vista mail to their usual email address. Further information on mail redirection can be found in the Help section of Vista.

### **Continual course improvement**

This course is a very interactive course. Formative assessment is essentially achieved via online discussion groups. A topic is available for general comments etc. Regular summative assessments are undertaken and changes made in response to any issues regarding the course. Periodically student evaluative feedback on the course is gathered, using among other means, UNSW's Course and Teaching Evaluation and Improvement (CATEI) Process. Student feedback is taken seriously, and continual improvements are made to the course based in part on such feedback. Significant changes to the course will be communicated to subsequent cohorts of students taking the course

### **ADMINISTRATIVE MATTERS**

Students should ensure they are familiar with the various policies related to expectations of students. Links to the Policies can be found on the School web page at <http://www.mining.unsw.edu.au/Governance/policies.htm>. Equity and diversity: those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course convener prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equity and Diversity Unit (9385 4734 or [www.equity.unsw.edu.au/disabil.html](http://www.equity.unsw.edu.au/disabil.html)). Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made. Information on designing courses and course outlines that take into account the needs of students with disabilities can be found at:

[www.secretariat.unsw.edu.au/acboardcom/minutes/coe/disabilityguidelines.pdf](http://www.secretariat.unsw.edu.au/acboardcom/minutes/coe/disabilityguidelines.pdf)