



UNSW
SYDNEY

Faculty of Engineering

School of Minerals and Energy Resources Engineering

Undergraduate Course Outline

MINE3230
Mine Planning
Dr Carlos Tapia

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1. INFORMATION ABOUT THE COURSE

Course Code:	MINE3230	Term:	T2, 2021	Level:	UG	Units/Credits	6 UOC
Course Name:	Mine Planning						

Course Convenor:	Dr Carlos Tapia						
Contact Details	School of Minerals and Energy Resources Engineering	EMAIL:	c.tapiacortez@unsw.edu.au				
		Phone:	0449955035				
Contact times	Lecture time schedule Mon 14:00 – 16:00; Wed 09:00 – 11:00						

1.1. Course Description

This course integrates fundamental technical knowledge of mining engineering with optimisation, economic and financial evaluation techniques. It aims to provide students the essential knowledge and practice needed for evaluating mining assets and generating accurate mine plans.

The course will cover all aspects of mine planning and the value chain with special attention on strategic and long-term, and covering the following study topics:

- Mineral Economics
- Mining Methods
- Optimisation Techniques
- Mine Design and Scheduling
- Economic Evaluation
- Financial Math
- Financial and risk assessment
- Mine Closure

The multidisciplinary nature of the course merges technical aspects of mining engineering, mathematical techniques, and the economic, financial and market aspects of the mining business to provide a comprehensive understanding of the techniques, variables and risks associated to the evaluation process of mining projects that determine its bankable feasibility, from construction to production.

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. Furthermore, a minimum achievement of 40% in the Final Exam is required to receive a passing grade for the course.

1.3. Assumed Knowledge

This course assumes that students have a good understanding of mining terms and descriptions, have been exposed to surface and underground mining methods and are familiar with mining development, operations and production.

1.4. Attendance

To pass this course it is expected that you will attend at least 80% of tutorials and lectures. *Failure to meet the specified attendance requirements of the course may result in the award of an Unsatisfactory Failure (UF) grade for the Course.* Attendance will be recorded when applicable. Normally, there is no make-up work for poor attendance. If you have misadventure or ill-health, please contact your course coordinator soon as possible. The attendance requirement is not meant to be punitive. It is included because participation is an important part of achieving the course outcomes.

2. AIMS, LEARNING OUTCOMES AND GRADUATE ATTRIBUTES

2.1. Course Aims

This course has three main aims:

1. To introduce the standard industrial techniques of mine planning, and mine project valuation and evaluation
2. To develop the technical, economic and financial skills that mining engineers need to develop mine plans and evaluate mining projects
3. To prepare student for developing PFS project in year 4

2.2. Learning Outcomes

By the end of this course, it is intended that the student will be able to understand:

1. The technical aspects of mining, financial math and optimisation tools and effectivity combine them for the development of accurate mine plans
2. The value chain of the mining business and strategies to maximise its value
3. All aspects of the optimisation processes into mine planning form technical and financial points of view
4. The role of finance into the mining business and effectively use it to develop financial technical models to assess the value and risk mine plans and determine the bankable feasibility of mining projects
5. The multidisciplinary nature of the mining engineering and how to consider, integrate and model all those aspects within an optimal - precise and accurate - mine plan

2.3. Graduate Attributes

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

1. Appropriate technical knowledge
2. Ability to apply knowledge of basic science and engineering fundamentals
3. In-depth technical competence in at least one engineering discipline
4. Possess advanced problem solving, analysis and synthesis skills with the ability to tolerate ambiguity
5. Ability to undertake problem identification, formulation and solution
6. Develop an ability for engineering design and creativity
7. Understanding of the principles of sustainable design and development
8. Develop the ability to think and work individually and in groups
9. Develop an awareness of opportunities to add value through engineering and the need for continuous improvement
10. Ability to communicate effectively, not only with engineers, but also with the community at large
11. Develop an ability to work and communicate effectively across discipline boundaries
12. Ability to function effectively as an individual and in multi-disciplinary and multi-cultural teams, with the capacity to be a team leader or manager as well as an effective team member
13. Develop an awareness of sustainability, multi-cultural and global issues
14. Understanding of and commitment to professional and ethical responsibilities
15. Possess an HSEC consciousness

3. REFERENCE RESOURCES

2.1. Reference Materials

- Camus, J P, 2002. *Management of Mineral Resources Creating Value in the Mining Business*, (Society for Mining, Metallurgy, and Exploration, Inc.: Littleton, CO, USA).
- Card, P, (2011) *Guidelines for economic evaluation of projects*, METPLANT 2011 - Metallurgical Plant Design and Operating Strategies, , pp. 1-11.
- Darling, P, 2011. *SME Mining Engineering Handbook*, 3Edition, (Society for Mining, Metallurgy, and Exploration, Inc.: Littleton, CO, USA).
- Dewhirst, R F and Knight Merz, S, 2013. Monograph 27 - Cost Estimation Handbook, 2Edition (The Australian Institute of Mining and Metallurgy: Australia).
- Gordon, R.L., Tilton, J.E., 2008. *Mineral economics: Overview of a discipline*. Resour. Policy 33, 4–11.
- Hall, B, 2014. *Cut-off Grades and Optimising the Strategic Mine Plan*, 300 p (The Australian Institute of Mining and Metallurgy: Australia).
- Hustrulid, W A, and Kuchta, M, 2006. *Open Pit Mine Planning & Design*, Volume 1 – Fundamentals, Edition (Taylor and Francis: London).
- InfoMine, 2015. Industry Standard for Mining Cost Estimating [online], Available from: < <http://costs.infomine.com/>>
- Lane, K F, 1988. *The Economic Definition of Ore - Cut-Off Grades in Theory and Practice*, (Mining Journal Books Limited, London).
- Pindyck, R.S., Rubinfeld, D.L., 2009. *Microeconomics*. Pearson/Prentice Hall.
- Rendu, J M, 2014. *Introduction to Cut-off Grade Estimation*, Edition, (Society for Mining, Metallurgy, and Exploration, Inc.: Littleton, CO, USA).
- Rudenno, V, 2004. *The Mining Valuation Handbook – Australian Mining and Energy Valuation for Investors and management*, 430 p (Wright Books: Victoria).
- Runge, I C, 1998. *Mining Economics and Strategy*, (Society for Mining, Metallurgy, and Exploration, Inc.: Littleton, CO, USA).
- US Federal Reserve. *FRB: H.10 Release--Foreign Exchange Rates--Nominal/Real Indexes* [online] Available from: < https://www.federalreserve.gov/releases/h10/summary/indexb_m.htm>
- World Bank, *Global Economic Monitor (GEM) Commodities| World DataBank* [online]. <[http://databank.worldbank.org/data/reports.aspx?source=Global-Economic-Monitor-\(GEM\)-Commodities](http://databank.worldbank.org/data/reports.aspx?source=Global-Economic-Monitor-(GEM)-Commodities)>

2.2. Other Resources

Selected readings as well as other supporting material (e.g. course outline and lecture notes) will be made available on LMS.

Videos are often provided to students as a web stream within the Moodle learning management system. Videos are not available for download by students, unless approved by the Course Convenor and either the Undergraduate or Postgraduate Coursework Director. Special consideration can be provided for students to access videos off-line (e.g. working remotely). Please contact the Course Convenor for more information. Note that UNSW reserves the right to deliver videos as a web stream rather than off-line and cannot provide videos that are copyright from other providers.

2.3. Online Resources

There are numerous articles / information sources on reservoir engineering on the web. Many of them are sound, but many are either very lightweight or contain errors. Be very careful in your choice of web sources. Remember, UNSW librarians are usually happy to help you locate articles or make suggestions regarding possible material to help you in your academic work. You can also access basic online help at <http://www.library.unsw.edu.au/>

2.4. Software and Hardware

- GEOVIA Whittle 4.5 [or 4.6 recently resealed version]

- Maptek Vulcan 11.0 [or recently resealed version]
- Microsoft Excel - Solver

4. COURSE CONTENT AND LEARNING ACTIVITIES

4.1 Learning Activities Summary

Week	Date	h	Topic	Content/Activity	Marked Activity
1A	31 st May	2	Introduction Technical Concepts	Course Introduction + QA Mine Planning Overview	
1B	2 nd Jun	2	Technical Concepts (cont)	Mining Method Selection Block Model & Block Valuation	
2A	7 th Jun	2	Processing & CoG	Mineral Processing & Route Selection) Cut-off Grade (CoG)	
2B	9 th Jun	2	Technical/Economic Strategies	CoG (cont) Equivalent Ore Grade Tutorial MP & CoG	
3A	14 th Jun	2	Economic Aspects of Mining	Mineral Economics Economic Theory: Macroeconomics	A02 Release
3B	16 th Jun	2		Economic Theory: Microeconomics Scale of Operation & Ec Evaluation	
4A	21 st Jun	2	Optimisation	Math concepts of Min and Max Linear Programming (LP) + Solver Floating Cone (FC), Tutorial (LP + FC)	
4B	23 rd Jun	2		Lerchs & Grossman (L&G) Economic Footprint (EFP) Tutorial (L&G + EFP)	
5A	28 th Jun	2	Software Training - Mine Planning & Scheduling	Whittle 4X: Demonstration and training	A02 Due
5B	30 th Jun	2		Whittle (cont) Mine Planning & Scheduling Tutorial	A03 Release
6A	5-7 Jul	2			
6B		2			
7A	12 th Jul	2	Fundamentals of Geomechanics	Guest Lecturer	
7B	14 th Jul	2	Quiz	Optimisation	Quiz 01
8A	19 th Jul	2	Coal Mining	Mining Systems, Planning & Scheduling	
8B	21 st Jul	2	Quiz	Mine Planning	Quiz 02
9A	26 th Jul	2	Financial & Technical Model	Valuation Strategies, Financial Instruments, Financial Math & DCF	
9B	28 th Jul	2		Depreciation & Amortisation Financial Math Tutorial	A03 Due
10A	2 nd Aug	2	Project Assessment	Risk and Sensitivity Analysis	
10B	4 th Aug	2	Course Review	Course Review	

4.2 Detailed Information on Assessment Tasks

Quiz (10% each): Tests will constitute multiple choice, true-false, short-answer, and/or relatively short computations based questions. The questions will be derived from the theoretical background and computations discussed during lectures and tutorials. Students must present computational steps, if necessary. Marks will be deducted for missing steps or incomplete solutions. Parameters and variables

along with units and applicable assumptions must be clearly defined in computations. Or each test, right answers, procedures and solutions of questions involving calculations will be disclosure immediately after marking release.

Mine Planning Project (40%) : The mine planning project constitutes two parts.

Part A - Manual Procedure (20%): This part will be based on a small-scale (hypothetical) ore body model and relevant economic/technical parameters. Students will develop an economic valuation model and its respective economic evaluation (manually using MS Excel) including: 1) mining method selection, 2) cut-off grade, processing and logistics strategists, 3) either ultimate pit limit or footprint, 4) production schedule, 5) Capex and Opex, 6) evaluation and recommendations. Students will be required to work in groups/teams. A formal report along with the softcopy of calculations is expected for grading, and the detailed marks distribution for each task will be provided as part of the project statement.

Part B – Mining Software Assistance (20%): This part will be based on a full-scale actual ore body block model and relevant economic/technical parameters. Assisted by mining software, students will generate an appropriated technical/economic model to determine: 1) ultimate pit, 2) eventual transition level between Open Pit and Underground operations, 3) economic footprint (if proceed), 4) production and development schedule. Students will also include a detailed economic evaluation that have to include: 1) economic valuation, 2) financial & technical model, 3) risk assessment, and 4) recommendations. A formal report is expected for grading, and the detailed marks distribution for each task will be provided as part of the project statement.

Group Composition: Given the expected number of students and project requirements, the students are required to form a group of 4 (maximum) members. Students are encouraged to form multicultural teams. Group formation must be completed with the submission of members' names and IDs by June 14th, 2021.

Final Examination (40%) : The final examination will be comprehensive in nature, as it will cover all topics (lectures and tutorials). It will constitute major computations-based questions. However, it may include multiple choice, true-false, short- answer, and/or relatively short computations-based questions. The details on the structure of the final exam will be provided as part of the unit review in Week 13. Students must present all computational steps, if necessary. Marks will be deducted for missing steps or incomplete solutions. Parameters and variables along with units and applicable assumptions must be clearly defined in computations. If required, formulae will be provided in the final examination.

4.3 Teaching and Learning Methods

This course uses different teaching and learning approaches including:

- Problem-/Project-based Learning
- Lectures and Tutorials
- Industry Guest Lectures
- Question/Answer Sessions
- Software Demonstrations/Trainings
- Self-directed Activities
- Group Activities
- Examinations

Project-based Learning: This course utilises project-based learning methods. Students will be given two group projects to work on. Students are required to work in groups, share the project workload, and have weekly meetings and discussions.

Lectures and Tutorials: Project work will be supported with weekly consultative and information-sharing session. The content of these are aligned with the projects to help students. Although this is an activity-based course, it is a requirement that all work is conducted within the School.

Group Work: Members of a group may elect to work on a topic of the project they feel more comfortable with but should integrate their work into the whole project. This should be reported back at their team meetings. Some marks will be taken from the underperforming students and allocated to the other group members. If a student makes no contribution to the project, he/she will receive zero for that project.

Effective Communication: One of the most effective means of learning is to effectively communicate what has been learned. Part of the assessment in this course will be determined by how effectively the results are communicated. There are a number of opportunities for this in the form of presentations and final reports. The process of writing reports, brainstorming within a design team, preparation and presentation of report both in front of an audience and in report form, requires clarity of thinking, defending and revising a design and analysing the risks inherent in a project.

Quiz: A quiz will be conducted in a controlled environment. The details are given under Assessment Section.

Final Exam: A Final Exam will be conducted during the exam period. The details are given under Assessment Section.

5. COURSE ASSESSMENT

5.1 Assessment Summary

Assessment task	Due date	Release date	Weight	Assessment	Learning outcomes assessed
A1.1	14 th July		10%	Quiz 1 In Class	1,2,4
A1.2	21 st July		10%	Quiz 2 In Class	1,2,4
A2.0	28 th June	14 th June	20%	Strategic Mine Planning Project Part A Manual Procedure Group Project (Max group of 4)	1,2,3,4,5
A3.0	28 th July	30 th June	20%	Strategic Mine Planning Project Part B Whittle Project Group Project (Max group of 4)	1,2,3,4,5
A4.0	TBA		40%	Final Exam (During Exam Period)	1,2,3,4

*You will need to bring notebook computer, tablet or smartphone with Wi-Fi connection to be able to participate in the In-class activities.

Assignments related details/submission-box will be available online through Moodle. Access to the Moodle site is via the Moodle icon on the MyUNSW homepage.

6. ASSESSMENT CRITERIA

The following assessment criteria provide a framework for students when preparing major assignments in the course as well as a guideline for assessors when marking an assignment.

The student is advised to review the relevant framework before undertaking their assignment. The criteria listed for each item of assessment and the descriptions contained therein are not intended to be prescriptive nor is it an exhaustive list. Rather it should be viewed as a framework to guide the student as to the type of information and depth of coverage that is expected to be evident in a submission for assessment; the framework illustrates for example what would distinguish an excellent achievement from a poor achievement.

The student should be cognisant that a range of factors is often being assessed in any one assignment; not just whether the results are numerically correct. Consideration is given to other relevant elements that contribute to the Learning Outcomes of the course as well as the Graduate Attributes of the overall degree program.

The student is cautioned against merely using the assessment criteria as a checklist. When assessing an assignment, elements in the framework will be examined in terms of quality and creativity. Hence ensuring all the listed elements are merely covered in an assignment is often not enough in itself and will not automatically lead to full marks being awarded. Other factors such as how the student went about presenting information, how an argument was structured and/or the elements supporting a particular recommendation or outcome are also important.

Finally, the framework can also be used to provide feedback to a student on their performance in an assignment. Periodically the criteria are reviewed and updated; consequently, changes may be made from time to time to the framework to improve its effectiveness in achieving both these objectives.

Note: Reference to RWG in the assessment criteria refers to the MEA Report Writing Guide, and GTA to the AusIMM Guide to Authors.

5.1 Further Assessment Information

Students will not be given exemptions or partial credit from any previous attempt of this course, for any piece of assessment. You must complete all learning activities and assessment items each time you take a course.

1. Project-based learning: This course utilises a project-based learning approach where groups of 3-4 students work as teams to develop mine production schedules and investigate several options to maximise the NPV. This year the project is based on a planning and scheduling of a copper/gold open pit project.
 - Each group will be responsible for completing the project during the twelve weeks of the Semester. The information provided on the project includes the location of the project, block model, geology, geotechnical and economic data.
 - Students will use Whittle Four X to carry out the analysis required for the project.
 - Management of the groups, group dynamics and assessment are discussed in the Learning Guide. For details on the scope of the project and tasks you will be required to perform
- 2 Peer Assessment: Group performance is a key component of the assessment for this course. The sole measure of performance of team work is by peer review. Teams which are having problems with unproductive or non-cooperative members are encouraged to seek the intervention of the course coordinator as early as possible. Do not leave these problems to the last minute. While in most cases the team's peer review assessment will be used for calculating final grades, the course coordinator reserves the final assessment of peer review to him/her.

5.2 Individual Quiz (A01.x)

Type	In Class Quiz
Learning Objectives Assessed	1, 2, 4
Due Date	14 th and 21 st July
Weight	10 % each
Task Description	Each quiz will consist in up to 20 questions to be completed within two hours. Questions will measure both theoretical knowledge and practical application of topics addressed. In all questions that require calculations the full procedure and calculation memory must be fully provided. Question will include any of the topics discussed in class until the week before the quiz
Criteria & Marking	The weight of each question will be determined based on the type and complexity of the question and will be noted on each one of the questions of the quiz. Each multiple selection or true or false question will be marked as correct (full mark) or incorrect (no mark). In the case of calculation questions partial marks will be established based on the procedure and partial results obtained. Open questions might be also partially marked if they address the key points asked.

Note: Students must have their student cards with them as these may be checked before the quiz.

5.3 Mine Planning Project - Part A Manual Procedure (A02)

Type	Group Project (Max group of 4)
Learning Objectives Assessed	1, 2, 3, 4, 5
Due Date	28 th June
Weight	20%
Task Description	The task requires the development of an accurate economic/technical modelling for a comprehensive economic evaluation of a hypothetical mining project. All works must be conducted without assistance of any mining software and all assumptions and calculation must be backed up by reliable sources and auditable records of calculations.
Criteria & Marking	A detailed task sheet, criteria and electronic files of the block model of a hypothetical deposit will be handed out to groups in week 3 so that groups can work on the project as each of the weekly topics is discussed and presented.
Submission	Assignments to be submitted through the Turnitin portal

5.4 Mine Planning Project - Part B Mining Software Assistance (A03)

Type	Group Project (Max group of 4)
Learning Objectives Assessed	1, 2, 3, 4, 5
Due Date	28 th July
Weight	20%
Task Description	The task requires the development of an appropriated mining optimisation of an Open pit or Underground project or a mix of both. The task should be developed using any of the mining software available at UNSW. All assumptions and calculation must be backed up by reliable sources and auditable records of calculations.
Criteria & Marking	The full project (database) using for the optimisation process through the mining software must be provided
Submission	Assignments to be submitted through the Turnitin portal

5.5 Final Examination (A04)

Type	Exam - during Exam Period
Learning Objectives Assessed	1, 2, 3, 4
Due Date	TBA
Weight	40%
Duration	120 minutes
Format	Written test encompassing open questions, problem solving and calculations
Task Description	This will be a comprehensive two-hour exam on all topics addressed in this course throughout the period. Questions will assess both theoretical knowledge and practical application of mining engineering techniques to solve practical problem-based questions that require drawing meaningful conclusions from calculations and engineering criteria. In this examination, it is only permitted the use UNSW approved (labelled) calculators.

	The exam will contain up to ten questions and the marking criteria will be the same as described in point 5.2. Student must answer eighty percent (80%) of questions
Criteria & Marking	A minimum achievement of 40% in the Final Exam is required to receive a passing grade for the course.

7. STUDYING A UG COURSE IN UNSW MINERALS AND ENERGY RESOURCES ENGINEERING

6.1 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 these instructions on how to redirect your UNSW emails: <https://www.it.unsw.edu.au/students/email/index.html>

6.2 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:
<https://unswinsight.microsoftcrmportals.com/web-forms/>

Course inquiries: these should be directed to the Course Convenor.

6.3 Computing Resources and Internet Access Requirements

UNSW Minerals and Energy Resources 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.

Mining Engineering Students: OMB G48/49

Petroleum Engineering Students: TETB

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

6.4 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

6.5 Assignment Submissions

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.

6.6 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 following section.

6.7 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: www.student.unsw.edu.au/special-consideration

6.8 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:

- WD – which usually indicates you have not completed one or more items of assessment or 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 Convenor as soon as practicable but no later than five (5) days after release of the course result. If you don't contact the convenor 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-enrol in the course.

6.9 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: www.studentequity.unsw.edu.au/

6.10 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 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.

6.11 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.

Feedback is given via <https://student.unsw.edu.au/myexperience> and you will be notified when this is available for you to complete.

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.

8. SCHOOL ASSESSMENT COVER SHEET



School of Minerals and Energy Resources Engineering Assessment Cover Sheet

Course Convenor: _____

Course Code: _____ Course Title: _____

Assignment: _____

Due Date: _____

Student Name: _____ Student ID: _____

ACADEMIC REQUIREMENTS

Before submitting this assignment, the student is advised to review:

- the assessment requirements contained in the briefing document for the assignment;
- the various matters related to assessment in the relevant Course Outline; and
- the *Plagiarism and Academic Integrity* website at < <http://www.lc.unsw.edu.au/plagiarism/pintro.html> > to ensure they are familiar with the requirements to provide appropriate acknowledgement of source materials.

If after reviewing this material there is any doubt about assessment requirements, then in the first instance the student should consult with the Course Convenor and then if necessary, with the Director – Undergraduate Studies.

While students are generally encouraged to work with other students to enhance learning, all assignments submitted for assessment must be their entire own work and duly acknowledge the use of other person's work or material. The student may be required to explain any or all parts of the assignment to the Course Convenor or other authorised persons. *Plagiarism* is using the work of others in whole or part without appropriate acknowledgement within the assignment in the required form. *Collusion* is where another person(s) assists in the preparation of a student's assignment without the consent or knowledge of the Course Convenor.

Plagiarism and *Collusion* are considered as Academic Misconduct and will be dealt with according to University Policy.

STUDENT DECLARATION OF ACADEMIC INTEGRITY

I declare that:

- This assessment item is entirely my own original work, except where I have acknowledged use of source material [such as books, journal articles, other published material, the Internet, and the work of another student/s or any other person/s].
- This assessment item has not been submitted for assessment for academic credit in this, or any other course, at UNSW or elsewhere.

I understand that:

- The assessor of this assessment item may, for the purpose of assessing this item, reproduce this assessment item and provide a copy to another member of the University.
- The assessor may communicate a copy of this assessment item to a plagiarism checking service (which may then retain a copy of the assessment item on its database for the purpose of future plagiarism checking).

Student Signature: _____

Date: _____

Students are advised to retain a copy of this assessment for their records and submission should be made in accordance to the assessment details available on the course Moodle site.