



Faculty of Engineering

**School of Minerals and Energy Resources
Engineering**

Postgraduate Course Outline

MINE8445

Mining Industry Project II

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1. INFORMATION ABOUT THE COURSE

Course Code:	MINE8445	Semester:	T2, 2020	Level:	PG	Units/Credits	6 UOC
Course Name:	Mining Industry Project II						

Course Convenor:	Dr Seher Ata						
Contact Details	School of Minerals and Energy Resources Engineering Old Main Building - Rm 159C	EMAIL:	s.ata@unsw.edu.au				
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1.1. Course Description

The MINE8445 course is for postgraduate Masters coursework students to further extend their research capabilities with a mining industry collaborator, extending successful completion of the MINE8440 core research project. It is intended to develop the capability and requisite skills of an engineer to build a foundation of knowledge related to a particular problem in mining engineering. This research foundation provides a basis on which to design a solution that is robust and safe, cost effective and appropriate to the end-user.

It is essential that this foundation reflects not only established thinking and practices but equally important, it should account for divergent and newly developing views as well as any limitations or weaknesses that underpin current understanding. The quality of the engineering solution is therefore a function of the quality and timing to complete this investigation; an investigation that forms part of a process known as research.

The research scope of MINE8445 is to significantly extend any previous industry research that has been undertaken by the student and/or others including two or more of the following categories: site or laboratory testing; related numerical modelling; comprehensive cost-benefit or geostatistical analysis; extension of constitutive theory.

On completion of this course, a student should be capable of preparing:

- a conference paper an examiners copy of thesis, and
- final corrected thesis submission

With permission from the School, and consistent with Program rules, this course can be extended in combination with MINE8690 to produce a significantly more comprehensive research and thesis. Note: Industry support is essential for this research project. Students need to have written evidence of industry support and/or agreement of an academic supervisor in the School in order to complete the course requirements. Please contact the School if more information is required.

1.2. Course Completion

Course completion requires:

- submission of **all assessment items** as detailed in the Course Outline; failure to submit all assessment items will result in the award of an Unsatisfactory Failure (UF) grade for the Course.
- Achieve a minimum of 60% of the Final Thesis marks.

1.3. Assumed Knowledge

This course assumes that a student has:

- knowledge of fundamental knowledge in mining engineering and technical disciplines related to the industry research project.
- successfully completed MINE8440.

submitted to the Course Authority of MINE8440 a completed copy the Project Plan Agreement (PPA) form by the student that has been signed by the student's Project Supervisor.

2. AIMS, LEARNING OUTCOMES AND GRADUATE ATTRIBUTES

2.1. Course Aims

The course aims to develop the capability and requisite skills of an engineer to build a foundation of knowledge related to a particular industry-related problem. This foundation provides a basis on which to design a solution that is robust and safe, cost effective and research outcomes that are appropriate to the end-user.

2.2. Learning Outcomes

At the conclusion of this course, students should be able to:

1. Define the major issues and benefits associated with a research topic.
2. Conduct library search relevant to the research topic and obtain reference sources from various relevant sources.
3. Produce a literature review encompassing a critique of the current state of knowledge related to the topic and other related information.
4. Develop a project management plan that outlines objectives, definition of tasks, activities and resources needed to achieve that objective, a schedule of activities and significant milestones, and a risk assessment with appropriate management and control measures.
5. Prepare a technical report that is consistent with the requirements and standards of the School of Mining Engineering and relevant professional societies.

2.3. Graduate Attributes

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

1. appropriate technical knowledge
2. having advanced problem solving, analysis and synthesis skills with the ability to tolerate ambiguity
3. awareness of opportunities to add value through engineering and the need for continuous improvement
4. being able to work and communicate effectively across discipline boundaries.

3. REFERENCE RESOURCES

3.1. Reference Materials

- *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)
- *Guide to Authors*. (Australasian Institute of Mining and Metallurgy: Melbourne) (Available for download from the AusIMM website)
- *The Complete Idiot's Guide to Project Management*. G Campbell and S Baker (Alpha: New York) or its equivalent.
- *Style Manual for Authors, Editors and Printers*, 2002. 6th edition (John Wiley & Sons)
- *The Research Project – How to Write It*, 2000. R Berry, 4th edition (Routledge: London)
- *How to Write a Better Thesis*, 2002. D Evans and P Gruba (Melbourne University Press: Melbourne)

3.2. Other Resources

- UNSW Mining and Petroleum subject guide (including a link to ACARP and how to find the reports in the catalogue).
<http://subjectguides.library.unsw.edu.au/content.php?pid=7632&sid=52212>
- UNSW Library services for Postgraduate students.
<http://library.unsw.edu.au/servicesfor/PGandH.html>
- New postgraduate course students are strongly advised to visit the above website and complete the ELISE and ELISE Plus tutorials. These will help develop skills in finding, using and evaluating scholarly information.
-
- The University and the Faculty provide a wide range of support services for students, including:
 - UNSW Learning Centre (<http://www.lc.unsw.edu.au>)
 - Counselling support - <http://www.counselling.unsw.edu.au>
 - Library training and support services - <http://www.library.unsw.edu.au/>
 - OnePetro – (<http://www.onepetro.org>)

3.3. Online Resources

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

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 (eg. 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.

The School has a report writing guide (RWG) available. A copy of this is available on the course moodle site.

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/>

4. COURSE CONTENT AND LEARNING ACTIVITIES

4.1. Learning Activities Summary

The milestones given in the following table are in place to help you progress through your research project in ten weeks. Please note that this is just an example. Students will need to create their own timeline and work schedule in accordance to their project.

UNSW Week	Week Starting	Topic	Content/Activities
1	1 June	Course Introduction	¹ Webinar Wed, 3 June, 3 -3.30 pm AEST
2	8 June		Data collection, analysis & review of findings with your supervisor
3	15 June		
4	22 June		
5	29 June		
6	6 July		
7	13 July		
8	20 July		A0.1_Project Presentation
9	27 July		Review final draft with your supervisor Prepare draft Conference Paper
10	3 August		
11	10 August		A2.0_Submit Minor Thesis for assessment
	1 Sept		A3.0_Submit Revised Minor Thesis Final Submission Requirements including: <ul style="list-style-type: none">• Hard-bound copy• Digital copy• Conference Paper

¹Check webinars times for your time zone here:

<http://www.timeanddate.com/worldclock/meeting.html>

If you are unable to join the live webinar or need a repeat viewing, it will be recorded, and is automatically available from the same Moodle link, usually within about 24 hours of the webinar.

Total student effort hours: Approx. 150

(Note: The above indication of “student effort hours” is indicative only – It reflects the anticipated level of total student involvement with the course – either through accessing or participating in online materials and activities; private research; preparation of assignments. Individual students may find their level of involvement differs from this schedule.

5. COURSE ASSESSMENT

5.1. Assessment Summary

The assessment will be based on the four components outlines in the below table.

All assessments (except A04) are due on Monday of the week, unless otherwise indicated in the table below.

Assessment task	Due date	Release date	Weight	Assessment	Learning outcomes assessed
A01	21 July	1 June	15%	Presentation (max. 20 slides) based on research project taken	2,4
A02	12 Aug	1 June	70%	Examiner's copy of thesis (max-15000 words) including Conference Paper. A series of arguments combined with the description and discussion of research undertaken	2,3,4,5
A03	1 Sept	24 Aug	10%	Revised Thesis (max- 15000 words)	2,3,4,5
A04	Ongoing		5%	Overall research progress and meetings	1,2,3

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, or at <https://moodle.telt.unsw.edu.au>

5.2. Assessment Requirements

Students are strongly encouraged to submit their report through the **Turnitin** (plagiarism detection software) before due date to see how their assignment is composed with regards to cited works and original content. This will allow students to self-assess and ensure their assignment meets the School standards before final submission. An originality report with a score higher than 20% may be cause for concern about the originality of content and will be reviewed by the Student's Project Supervisor for potential plagiarism.

Who

- **All assessment items must be submitted to the Course Convenor.** It must not be submitted directly to the student's individual Project Supervisor.

When

- If not otherwise stated, **the default deadline for submission of an assignment is 10:00am on Monday in the nominated week.** If the Monday coincides with a Public Holiday then the due date is the next business day in the nominated week.
- Prior to submission, students should read the School Policy on *Assignment Submissions* which can be viewed at: <https://www.engineering.unsw.edu.au/mining-engineering/what-we-do/about-the-school/school-general-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). In particular note the requirement that only PDF documents should be uploaded and the required file naming convention.

Where

- Submissions must be made electronically through Turnitin in the LTMS unless otherwise stated. Students are strongly encouraged to submit their report through the Turnitin (plagiarism detection software) before due date to see how their assignment is composed with regards to cited works and original content. This will allow students to self-assess and ensure their assignment meets the School standards before final submission. An originality report with a score higher than 20% may be cause for concern about the originality of content and will be reviewed by the Student's Project Supervisor for potential plagiarism. For further details see the section on University Policies for details on assignment submissions, late submissions and special consideration.

What

- The submission must be:
 - a single document in PDF format; and
 - prepared in the form of a formal report that includes a list of reference sources cited in the report, prepared in accordance with the report writing standards of the School as contained in the **MEA Report Writing Guide for Mining Engineers**. A copy can be obtained from the UNSW Bookshop or downloaded from the School webpage.
- Each submission must have appended:
 - to the front, a signed copy of the Student Declaration Form and Coversheet; and
 - to the end, a completed self-assessed copy of the Assessment Criteria.Copies of both documents are available for download from LTMS.
- It is **strongly recommended** when preparing the major assignment; students use the **Report Template** available from LTMS. Note: as this template already incorporates the required the Student Declaration Form, a student does not need to separately append a signed copy of coversheet to their assignment.

How

- The submitted document must be consistent with the following file naming convention: < FamilyNameInitials_CourseCode_AssignmentNumber.pdf >.
- A typical complaint filename would take the following form < SmithPD_MINE8445_A01.pdf > which elements correspond to:
 - Family name of student: Smith
 - Initial(s) of student: PD
 - Course Code: MINE8445
 - Assignment number: A01...as defined in the Course Outline for the assessment task
 - File format: PDF document

5.3. Assessment Process

It is the responsibility of the student to identify a suitable project to be undertaken as the core component of this course. Students should contact the Course Convenor in the first instance for advice, who will then direct the student to a potential supervisor within the School.

This course consists of three assessment items: presentation, Examiner's copy of thesis and final thesis. Assessment items will be graded:

- Presentation: Assessment will be carried out by two academics in the School. The student's Project Supervisor may be an examiner.
- Examiner's copy of thesis: Assessment will be carried out by two academics in the School. The student's Project Supervisor may be an examiner.
- Final thesis: Assessment will be taken by the student's Project Supervisor.

5.4. Assignment Attachments

Each assignment submitted for assessment must be attached with:

- an official School Coversheet at the front of the assignment; and
- the requisite Assessment Criteria form at the end of the assignment with the self-assessment completed by the student.

If either or both of these are not attached, then the assignment will be deemed non-compliant with the assessment requirements. A non-compliant submission may not be marked, and zero marks may be awarded for that assessment item. In any case a minimum 5% of the total marks will be forfeited for that assignment.

6. ASSESSMENT CRITERIA

6.1. Presentation

All students taking Mining Industry Research Project II are required to present an oral presentation based on their research project. A summary project presentation (power point), based on a maximum of 20 slides/20 minute presentation must be submitted. Presentation should be uploaded to Moodle by due date, but a live/on-line presentation may also be scheduled in the following week, by prior arrangement. Questions on presentations will be delivered via the live/on-line media, or via Moodle.

Table 3 – Presentation Assessment Criteria

<i>Criteria</i>	<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>	<i>Poor</i>	<i>nil</i>
<i>Introduction, objectives & background</i>	<ul style="list-style-type: none"> provided an excellent and comprehensive overview of the context for the project, the project objective, and likely benefits 	<ul style="list-style-type: none"> provided a good overview of the context, objectives and benefits of the project with few points that were not clearly discussed 	<ul style="list-style-type: none"> provided a reasonable overview of the context, objectives and benefits of the project but lacked clarity 	<ul style="list-style-type: none"> provided only limited overview of the project resulting in some questions about the project 	<ul style="list-style-type: none"> provided limited or confusing overview resulting in questions about project 	<ul style="list-style-type: none"> provided no background to project
	15 14	13 11	10 8	7 4	3 1	0
<i>Research quality and analysis</i>	<ul style="list-style-type: none"> demonstrated comprehensive knowledge of past work undertaken in the topic area research methodology appeared to be based on solid scientific principles that also demonstrated a degree of creative approach to investigation analysis of results indicated great insight drawing on models and other analytical tools linking back to theory and objectives 	<ul style="list-style-type: none"> demonstrated sound knowledge of past work on the topic research methodology was soundly based analysis of results made use of some models/ analytical tools that indicated reasonable insight of problem/issues 	<ul style="list-style-type: none"> demonstrated an adequate knowledge of the topic followed soundly-based but established methodology minimal depth and scope of analysis of the results 	<ul style="list-style-type: none"> demonstrated minimal knowledge of the topic area unclear approach or approach not soundly based little analysis undertaken 	<ul style="list-style-type: none"> demonstrated limited or no knowledge of the topic approach appeared to be unsoundly based limited or no analysis of results presented 	<ul style="list-style-type: none"> content missing no content; content missing; content not relevant; and/or content derived from/attribution to work of others with minimal analysis or added insight by student
	40 34	33 27	26 20	20 10	9 1	0
<i>Conclusions and recommendations</i>	<ul style="list-style-type: none"> clear, concise, appropriate, useful and strongly insightful conclusions soundly linked to the observed results 	<ul style="list-style-type: none"> clear and well developed set of conclusions demonstrating recognition of the significance of the results, 	<ul style="list-style-type: none"> reasonable articulation of conclusions linked to results 	<ul style="list-style-type: none"> unclear or questionable set of conclusions not fully supported by the results 	<ul style="list-style-type: none"> invalid or inappropriate conclusions that had only tenuous justification 	<ul style="list-style-type: none"> lacked any clear conclusions lack of any justification
	15 14	13 11	10 8	7 4	3 1	0
<i>Response to questions</i>	<ul style="list-style-type: none"> excellent and valid responses to questions allowed for min of 5 minutes for question time 	<ul style="list-style-type: none"> appropriate and valid responses to questions 	<ul style="list-style-type: none"> adequate responses to questions 	<ul style="list-style-type: none"> barely appropriate and/or valid responses to questions 	<ul style="list-style-type: none"> inappropriate and invalid responses to questions 	<ul style="list-style-type: none"> unable to reasonably respond to questions no time for questions

<i>Criteria</i>	<i>Excellent</i>		<i>Good</i>		<i>Satisfactory</i>		<i>Unsatisfactory</i>		<i>Poor</i>		<i>nil</i>	
	10	9	8	7	6	5	4	3	2	1	0	
<i>Quality of presentation aids and resources</i>	<ul style="list-style-type: none"> • excellent balance in content and information that supplemented rather than over-powered the message of the presenter • appropriate number of slides/visual aids • slides designed well so required little effort and easy to read/digest with appropriate sized graphs, wording etc • no errors on slides 		<ul style="list-style-type: none"> • good balance in content • slides easy to read with appropriate sized graphs, wording etc • few minor errors 		<ul style="list-style-type: none"> • adequate balance of information in slides • reasonably legible and mostly well designed • some slides contained several minor errors in formatting, wording, sizing etc 		<ul style="list-style-type: none"> • some slides difficult to read and/or too much content • slides dominated the communication process • several major errors/mistakes 		<ul style="list-style-type: none"> • most slides were poorly designed • message was often confusing • many major errors/mistakes 		<ul style="list-style-type: none"> • slides mostly illegible, confusing and/or containing many errors that distracted the audience from the main messages • an inappropriate number of slides/visual aids 	
	10	9	8	7	6	5	4	3	2	1	0	
<i>Quality of delivery</i>	<ul style="list-style-type: none"> • excellent standard of verbal presentation by speaker to the audience • speaker was mindful of audience in delivery • delivered with confidence and enthusiasm that lead to real engagement of the audience • well-structured so that presentation flowed smoothly leaving audience feeling they had been provided with all relevant info on background & issues, method, and outcomes related to project • completed on time 		<ul style="list-style-type: none"> • clear presentation of main messages • largely confident delivery with reasonable level of engagement • well-planned and structured that aided in understanding by audience 		<ul style="list-style-type: none"> • reasonable quality of presentation • some recognition of need of audience in delivery • reasonable delivery • some evidence of planning evident that ensured the audience was informed of most of the main messages • delivery appeared rushed in places seemed rushed and important messages went 		<ul style="list-style-type: none"> • generally unsatisfactory presentation • speaker spoke to screen and/or notes, not to audience • messages often confused and/or ambiguous leading to lack of engagement of audience • presentation difficult to follow partly due to poor planning of presentation, erratic structure and/or method of delivery • delivery appeared seemed rushed and important messages were not well communicated 		<ul style="list-style-type: none"> • poorly presented with little or poor structure • poorly presented leading to alienation /lack of engagement of audience • with little evidence of planning and/or poor structure 		<ul style="list-style-type: none"> • inaudible presentation and/or • speaker was unaware of/ignored audience • lacking any structure and/or • difficult to understand main messages • poor time management and/or not completed within allotted timeframe 	
	10	9	8	7	6	5	4	3	2	1	0	

6.2. Examiner's Copy of Thesis

Examiner's copy of thesis should be approximately 15,000 words excluding appendices, tables and illustrative matter. The thesis should be ordered; critical and reasoned exposition of knowledge gained through the student's efforts and includes evidence of awareness of the literature.

Thesis should be written in the style of conference paper. You need to introduce the thesis, identify what is already known about your topic in the literature, let the reader know what methodology you used, state the results and discuss them, identify the conclusions. A reference list should appear at the end of your report. The report must strictly adhere to AusIMM's Guide to Authors. Information that is not essential to explain findings, but that supports analysis, validates conclusions or pursues a related point should be placed in an appendix.

The assessment criteria that will be used are in the following table:

Table 4 – Examiner's Copy of Thesis Assessment Criteria

Criteria	Excellent	Good	Satisfactory	Unsatisfactory	Poor	nil
Abstract	<ul style="list-style-type: none"> Abstract is well written and accurately yet concisely captures all the essential aspects of the project objective, methodology, outcomes and issues 	<ul style="list-style-type: none"> Abstract is reasonably well written and captures most of the essential elements of the project 	<ul style="list-style-type: none"> Abstract is adequately written and captures most elements though missing some information 	<ul style="list-style-type: none"> Abstract is poorly written and does not clearly convey information concerning project topic, method, issues and/or outcomes 	<ul style="list-style-type: none"> Abstract is badly written and/or does not summarise the project topic and its outcomes 	<ul style="list-style-type: none"> Abstract is missing and/or largely incomplete
	10 9	8 7	6 5	4 3	2 1	0
Introduction	<ul style="list-style-type: none"> Introduction provides a clear definition of the aims and objectives and, scope of project clearly identifies the relevance and significance of the project to the industry 	<ul style="list-style-type: none"> Introduction provides a good definition of the aims and objectives and scope of project identifies the relevance and significance to industry 	<ul style="list-style-type: none"> Introduction satisfactorily outlines the aims and objectives and/or provides a reasonable discussion of relevance and significance to industry 	<ul style="list-style-type: none"> Incomplete and/or unclear definition of project scope 	<ul style="list-style-type: none"> Project topic and scope are very unclear and/or confused 	<ul style="list-style-type: none"> Introduction is missing and/or largely incomplete
	5	4	3	2	1	0
Background and methodology/ experimental procedures	<ul style="list-style-type: none"> extensive, relevant and logically organised review that critically analysed previous work on the topic and sets the scene for the research to be conducted presented an excellent description of the research methodology and/or experimental procedure that was used to obtain data 	<ul style="list-style-type: none"> relevant and logically organised review that critically analysed previous work on the topic and set the scene for the research to be conducted presented a good description of the research methodology and/or experimental procedure that was used to obtain data 	<ul style="list-style-type: none"> acceptable coverage of background material with some critical analysis applied that showed basic understanding of the topic presented an acceptable description of the research methodology and/or experimental procedure that was used to obtain data 	<ul style="list-style-type: none"> limited coverage of background material that lacked critical analysis. Some flaws in the basic understanding of this material was evident presented a limited description of the research methodology and/or experimental procedure that was used to obtain data 	<ul style="list-style-type: none"> extremely limited coverage of background material. A lack of understanding of the material in the topic area was evident poor description of the research methodology and/or experimental procedure that was used to obtain data 	<ul style="list-style-type: none"> critique of previous work is missing and/or largely incomplete methodology and/or experimental procedures missing
	10 9	8 7	6 5	4 3	2 1	0

<i>Criteria</i>	<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>	<i>Poor</i>	<i>nil</i>
Results and analysis	<ul style="list-style-type: none"> all relevant results are presented in a manner from which meaningful analyses and interpretations are drawn good and creative approach to analysis of results interpreted against the stated objectives of the research 	<ul style="list-style-type: none"> most results are presented in a manner from which meaningful analyses and interpretations are drawn results are interpreted based on established approach relevant to stated objectives of the research 	<ul style="list-style-type: none"> many results are presented in a manner from which meaningful analyses and interpretations are drawn results are not interpreted against the stated objectives of the research. 	<ul style="list-style-type: none"> some results are presented and some analysis and interpretations of these results are given not aligned to the stated objectives of the research. 	<ul style="list-style-type: none"> poorly presented some results and/or some results missing little or no analysis or interpretation of results 	<ul style="list-style-type: none"> no results presented and/or analysed
	30 26	25 20	19 15	14 8	7 1	0
Quality of research and innovation in research process	<ul style="list-style-type: none"> approach highlights creativity and innovation, while working to an organised plan actual execution of the work showed the application of knowledge gained from background research through relevant analysis of data to generate new knowledge. 	<ul style="list-style-type: none"> approach is systematic and showed some innovation actual execution of the work showed the application of knowledge gained from background research through analysis of data 	<ul style="list-style-type: none"> approach is reasonably systematic. actual execution of work showed some understanding via application of prior knowledge and some background research to produce limited analysis of data 	<ul style="list-style-type: none"> approach is not well considered and does not flow logically from the background research presented actual execution of work shows flawed understanding and little application of either background research or prior knowledge 	<ul style="list-style-type: none"> approach is haphazard and has no logical basis actual execution of the work shows very little understanding and little application of either background research or prior knowledge 	<ul style="list-style-type: none"> little/no evidence of quality of research and innovation
	20 19	18 15	14 10	9 5	4 1	0
Conclusions and recommendations	<ul style="list-style-type: none"> excellent, clear and concise summary of the outcomes of the research that demonstrates sound comprehension and insight into the significance of the results excellent and appropriate recommendations for continuation and improvement of the research were discussed 	<ul style="list-style-type: none"> good summary of the outcomes of the research that demonstrates comprehension and some insight into the significance of the results some recommendations for continuation and improvement of the research were discussed 	<ul style="list-style-type: none"> reasonable summary of the outcomes of the research that demonstrates some comprehension but limited insight into the significance of the results limited recommendations for continuation and improvement of the research were discussed 	<ul style="list-style-type: none"> summary of the outcomes of the research that demonstrates limited comprehension few, inappropriate and/or irrelevant recommendations 	<ul style="list-style-type: none"> fails to explain what was achieved with no real comprehension demonstrated 	<ul style="list-style-type: none"> no conclusions and/or recommendations
	10 9	8 7	6 5	4 3	2 1	0

Criteria	Excellent	Good	Satisfactory	Unsatisfactory	Poor	nil
Referencing	<ul style="list-style-type: none"> all in-text citations were correct as per the RWG; and all sources of information were referenced; and all listings in the References section were correct and exactly in total accord with AusIMM referencing requirements as defined in the GTA and RWG; and there were no references missing from the References section 	<ul style="list-style-type: none"> majority of in-text citations were correct with only a few minor errors; and majority of sources of information were referenced with only a few minor exceptions; and most of listings in the References section were correct and in total accord with AusIMM referencing requirements as defined in the GTA and RWG; and there was only one reference missing from the References section 	<ul style="list-style-type: none"> most in-text citations were correct though there were several minor errors; and/or some information was not referenced; and many listings in the References section were correct and in accord with AusIMM referencing requirements as defined in the GTA and RWG with only a few very minor exceptions; and there were only a few references missing from the References section 	<ul style="list-style-type: none"> many errors with in-text citations; and/or limited/poor range of references and/or not relevant to research topic; and/or too little use of in-text citations and/or several instances of information not being properly referenced to identify source of information; and/or many errors in the References section and/or references were not correct and were not in accord with AusIMM referencing requirements as defined in the GTA and RWG; and/or there were several references missing from the References section 	<ul style="list-style-type: none"> most in-text citations had errors; and/or too few references and/or most references were not relevant to research topic; and/or little use of made of in-text citations to identify source of information and/or only a few references cited in the text to identify source of information; and/or many instances of information not being properly referenced to identify source of information; and/or most of the listings in the References section were incorrect and/or were not in accord with AusIMM referencing requirements as defined in the GTA and RWG; and/or there were many references missing from the References section and/or it was largely incomplete. 	<ul style="list-style-type: none"> there was no References section and/or no in-text citation in main body of report of information sources; and/or incorrect system of citing references was used; and/or incomplete bibliographic details provided for references; and/or incorrect system of listing references in the References section; and/or no details provided for References; and/or did not conform to AusIMM referencing requirements as defined in the GTA and RWG.
	5	4	3	2	1	0
Standard of thesis presentation	<ul style="list-style-type: none"> structure of thesis contains all required sections and follows standard order of presentation progression for a thesis in accord with RWG structure follows a logical progression format of is completely in accord with the report writing conventions detailed in RWG use of tables, figures and equations is correct and completely in accord with the RWG with no errors writing style is appropriate and completely in accord with a thesis no spelling and grammatical errors etc 	<ul style="list-style-type: none"> structure is complete though it has a few minor errors format is largely in accord with RWG with only a few minor errors use of tables, figures and equations is largely correct with only a few minor errors style is largely appropriate for a technical report with a few minor exceptions largely free of spelling and grammatical errors 	<ul style="list-style-type: none"> structure is mostly correct and/or has some minor errors format is mostly in accord with the RWG though it has some minor errors use of tables, figures and equations is mostly correct though there are several minor errors style is appropriate in most instances with some minor errors several minor spelling and grammatical errors 	<ul style="list-style-type: none"> several issues with structure and/or many minor errors and/or omissions many issues with format of thesis as it deviates from RWG some issues with use of tables, figures and/or equations writing style is inappropriate in some instances many instances of spelling and/or grammatical errors 	<ul style="list-style-type: none"> significant issues with structure and/or many major errors and significant omissions large number of significant major issues in format use of tables, figures and/or equations is largely inconsistent with RWG writing style is inappropriate in many instances large number of spelling and/or grammatical errors 	<ul style="list-style-type: none"> information not presented in a form expected in a research thesis and/or not compliant with RWG most essential elements of structure are missing thesis has no logical structure significant amount of information is missing format not in accord with the RWG standards use of tables, figures and/or equations is incorrect inappropriate writing style for a research thesis major issues /numerous spelling and/or grammar errors
	10 9	8 7	6 5	4 3	2 1	0

6.3. Conference paper

The assessment criteria and relative weighting that will be used in assessing the Conference Paper is summarised in the following table.

Assessment Criteria – Conference Paper

Criteria	Excellent	Good	Satisfactory	Unsatisfactory	Poor	nil
<i>Title, Abstract & Introduction</i>	<ul style="list-style-type: none"> Title reflects well the content of the Paper Abstract is informative and summarises the paper in one paragraph Introduction provides the reader with a concise background to the topic that is appropriately referenced 	<ul style="list-style-type: none"> Title is good reflection of the content of the Paper Abstract is informative and summarises the paper in one paragraph with minor errors. Introduction provides the reader with relevant background to the topic 	<ul style="list-style-type: none"> Title essentially reflects the content of the Paper Abstract is informative and summarises the paper in one paragraph with some errors Introduction provides the reader with some background to the topic 	<ul style="list-style-type: none"> Title does not reflect the content of the paper Abstract is not informative with major errors and does not summarise the paper in one paragraph Introduction provides the reader with little background to the topic 	<ul style="list-style-type: none"> Title does not reflect the content of the Paper or is missing Abstract poorly structured with key information missing Introduction provides the reader with very little background to the topic 	<ul style="list-style-type: none"> Title, Abstract and Introduction missing
	20 19	18 15	14 10	9 5	4 1	0
<i>Methodology and/or experimental procedures</i>	<ul style="list-style-type: none"> Paper provides the reader with an excellent and clear description of the research methodology and/or any experimental procedure that was used to obtain experimental data 	<ul style="list-style-type: none"> Paper provides the reader with a reasonable description of the research methodology and/or any experimental procedure that was used to obtain data 	<ul style="list-style-type: none"> Paper provides the reader with a brief description of the research methodology and/or any experimental procedure that was used to obtain data, which contains minor errors 	<ul style="list-style-type: none"> Paper provides the reader with a brief description of the research methodology and/or any experimental procedure that was used to obtain data, which contains major errors 	<ul style="list-style-type: none"> Paper provides the reader with a limited description of the research methodology and/or any experimental procedure that was used to obtain data 	<ul style="list-style-type: none"> Methodology and/or Experimental Procedures missing
	20 19	18 15	14 10	9 5	4 1	0
<i>Results and discussion</i>	<ul style="list-style-type: none"> Paper is supported with appropriate and incisive analysis supported by results with detailed discussion that advances the knowledge of the topic 	<ul style="list-style-type: none"> Paper is supported with results, analysis and discussion that partially advance the knowledge of the topic 	<ul style="list-style-type: none"> Paper is supported with some results, analysis and discussion 	<ul style="list-style-type: none"> Paper has only minimal results and discussion but analysis is missing 	<ul style="list-style-type: none"> Paper contains limited results and little discussion of relevance 	<ul style="list-style-type: none"> Results and discussion missing
	40 36	35 28	27 20	19 12	11 1	0
<i>Conclusions</i>	<ul style="list-style-type: none"> Concise, appropriate and excellent conclusions, clearly demonstrating the significance of the results 	<ul style="list-style-type: none"> Good conclusions, but significance of the results not clearly demonstrated 	<ul style="list-style-type: none"> Reasonable conclusions but significance of the results only partially addressed 	<ul style="list-style-type: none"> Unreasonable conclusions not fully supported by the results in the paper 	<ul style="list-style-type: none"> Invalid conclusions 	<ul style="list-style-type: none"> Conclusions missing
	10 9	8 7	6 5	4 3	2 1	0

<i>Criteria</i>	<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>	<i>Poor</i>	<i>nil</i>				
<i>Layout and standard of Paper</i>	<ul style="list-style-type: none"> Paper adheres to AusIMM's <i>Guide to Authors</i>, with no or few spelling and grammatical errors. References are correctly used and all headings used in the paper are relevant. Figures and Tables are correctly formatted, legible and relevant to the content of the paper 	<ul style="list-style-type: none"> Paper adheres to AusIMM's <i>Guide to Authors</i>, with some spelling and grammatical errors. References are correctly used and all headings used in the paper are relevant. Figures and Tables are correctly formatted, legible and relevant to the content of the paper, but contain minor errors 	<ul style="list-style-type: none"> Paper adheres to AusIMM's <i>Guide to Authors</i>, with spelling and grammatical errors to be corrected. References are used and not all headings used in the paper are relevant. Figures and Tables are correctly formatted, legible and relevant to the content of the paper, but contain some errors 	<ul style="list-style-type: none"> Paper partially adheres to AusIMM's <i>Guide to Authors</i>, with major spelling and grammatical errors to be corrected. Few references are used and many headings used in the paper are not relevant. Figures and Tables contain major errors 	<ul style="list-style-type: none"> Paper does not adhere to AusIMM's <i>Guide to Authors</i>, with major spelling and grammatical errors to be corrected. No references are used and many headings used in the paper are not relevant. Figures and Tables contain major errors 	<ul style="list-style-type: none"> Unable to read paper 				
	10	9	8	7	6	5	4	3	2	1

6.4. Consultation with Supervisor

The assessment criteria and weighting that will be used in assessing the quality of the student consultations is summarised in the following table.

Assessment Criteria – Consultation with Supervisor

<i>Criteria</i>	<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>	<i>Poor</i>	<i>nil</i>
<i>Quality of consultation</i>	<ul style="list-style-type: none"> • student maintained regular contact with academic supervisor (at least once a week), and • clearly demonstrated consistent effort and progress, and • discussed points that demonstrated student was considering potential issues as well as options to resolve these issues related to project, and • was able to clearly demonstrate significant initiative and competence that contributed to successful completion of first stage of project 	<ul style="list-style-type: none"> • student maintained regular contact with academic supervisor (at least once a fortnight), and • demonstrated to a reasonable degree of some effort and progress of project, and • discussed some issues related to project, and • demonstrated competence in completing project and was largely self-directed 	<ul style="list-style-type: none"> • student had intermittent contact with academic supervisor (at least once a month), and • indicated sporadic progress, and • some initiative in resolving issues • but had to be largely guided in project by Supervisor 	<ul style="list-style-type: none"> • student had infrequent contact with academic supervisor (e.g. two to four times during semester), and/or • little evidence to suggest otherwise that the project was not high on agenda and not left until final weeks before submission, and • little initiative demonstrated nor ownership shown of the project unless directed by Supervisor 	<ul style="list-style-type: none"> • student had very little contact if any with academic supervisor (perhaps only once for the semester), and/or • little evidence to suggest otherwise that large portion of the project was left till the last minute, and • lack of any initiative demonstrated nor ownership shown of the project 	<ul style="list-style-type: none"> • lack of any meaningful consultation by student with academic supervisor
	5	4	3	2	1	0

7. STUDYING A PG 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 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://student.unsw.edu.au/email-rules>

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:
<https://unswinsight.microsoftcrmpartals.com/web-forms/>

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

7.3. 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

7.4. 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

7.5. Assessment Criteria for Postgraduate Programs

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. All students are encouraged to take a closer look at this framework before, during and after completing an assignment.

The descriptions in the framework will help you and your facilitator to identify where your assignment is ranked – from excellent to poor achievement. We ask that you don't use the 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.

7.6. 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.

7.7. 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>. See the following section for further details:

In the case of the Project Report, penalty marks will be applied at the following rate if submitted after the due date: five (5) percentile points of the maximum possible mark for each day or part thereof that the assessment is overdue.

For example: if a student submitted the Project Report five days after the due date and the unadjusted mark was 68% then the final adjustment mark for the assignment would be 43%; that is the raw mark of 68% less 25 percentile points (5 days @ 5 percentile points per day).

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

7.9. Unsatisfactory and/ or Non-completion of course

A student who has not satisfactorily completed all the requirements of MINE8440 Mining Industry Research Project I or MINE8690 Mining Geotechnical Project will not have met the prerequisite requirements and therefore will not be eligible to undertake MINE 8445 Mining Industry Research Project II.

7.10. 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 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.

7.11. 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/

7.12. 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://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.

7.13. Report Writing Guide for Mining Engineers

The School has a report writing guide (RWG) available for all mining engineering students. View this website to download a copy of this guide: https://www.engineering.unsw.edu.au/minerals-energy-resources/sites/mine/files/publications/MEA_ReportWritingGuide_eBook_2018ed.pdf

7.14. 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.



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 other 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.