



Faculty of Engineering

**School of Minerals and Energy Resources Engineering**

Postgraduate Course Outline

MINE8440

Mining Industry Research Project 1

A/Prof Seher Ata

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## 1. INFORMATION ABOUT THE COURSE

Course Code:	MINE8440	Term:	T1, 2021	Level:	PG	Units/Credits	6 UOC
Course Name:	<b>Mining Industry Research Project 1</b>						

Course Convenor:	<b>A/Prof Seher Ata</b>						
Contact Details	School of Minerals and Energy Resources Engineering Room 159C, Old Main Building	EMAIL:	s.ata@unsw.edu.au				
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Contact times	By appointment						

### 1.1 Course Description

The MINE8440 course is a core requirement for postgraduate Masters level students to demonstrate a substantial research project or scholarship. The research course is also available for Graduate Diploma level students, and is essential for these students who are intending to articulate to the Masters level.

This course 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. The research should link closely with industry partners or applied research that will be of benefit to industry. 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 MINE8440 is to significantly extend any previous industry research that has been undertaken by the student and/or others including one 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 research proposal that accounts for the current understanding of issues pertinent to a defined topic; objectives of the proposal research project and the tasks, activities and resources necessary to achieve that objective
- a critical review of literature encompassing a critique of the current state of knowledge as well as information on other related issues; and
- a research thesis including new, original data and analysis and detailed interpretation and recommendations for implementation and further research to address any limitations and uncertainty that is identified

With permission from the School, and consistent with Program rules, this course can be extended as MINE8445 and/or MINE8690 with significantly more comprehensive research and thesis.

*MINE8440 Mining Industry Research Project 1, T1 2021*

Note: Permission to enrol in this course requires written evidence of industry support and/or agreement of an academic supervisor in the School. Industry support is essential for research projects that are to be extended for Masters programs that require MINE8455 and/or MINE8690, and is highly recommended for Graduate Diploma programs. Industry support is to include in-kind contributions from industry staff, access to relevant site data and/or samples and/or resources to support applied research. Industry agreement to publish results of the research is required, or an agreement to publish aggregated results that do not identify specific mine sites or confidential information. Alternatively, academic supervisors offer research projects as part of applied research programs.

## **1.2 Course Completion**

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

## **1.3 Assumed Knowledge**

This course assumes that a student:

- has fundamental knowledge in mining engineering and technical disciplines related to the industry research project.

## 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

1. 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).
2. Guide to Authors. (Australasian Institute of Mining and Metallurgy: Melbourne) (Available for download from the AusIMM website).
3. The Complete Idiot's Guide to Project Management. G Campbell and S Baker (Alpha: New York) or its equivalent.
4. Style Manual for Authors, Editors and Printers, 2002. 6th edition (John Wiley & Sons)
5. The Research Project – How to Write It, 2000. R Berry, 4th edition (Routledge: London)
6. How to Write a Better Thesis, 2002. D Evans and P Gruba (Melbourne University Press: Melbourne).

### 3.2 Other Resources (if applicable)

- 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>
- EndNote, software package available to UNSW students.
- 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 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 (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.

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/>

### 3.4 Report Writing Guide

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

## 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 10 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	15 Feb	Course Introduction	<sup>1</sup> Microsoft Teams, Tuesday, 16 Feb, 2.30-3.30 pm AEST
2	22 Feb		
3	1 March		<b>A1.0_ Submit research proposal for assessment</b>
4	8 March		Data collection analysis & review of findings with your supervisor
5	15 March		
6	22 March		
7	29 March		
8	5 April		
9	12 April		
10	19 April		Review final draft with your supervisor
	7 May		<b>A2.0_Submit Minor Thesis for assessment</b>
	28 May		<b>A3.0_Submit Minor Thesis</b> Final Submission Requirements including: <ul style="list-style-type: none"><li>• Hard-bound copy</li><li>• Digital copy</li></ul>

<sup>1</sup> Check Microsoft Teams 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 as outlined in the below table.

All assessments except A4, are due 12 noon Sydney time on Monday of the week, unless otherwise indicated in the table below

Assessment task	Due date	Release date	Weight (%)	Assessment	Learning outcomes assessed
A1.0	1 March	15 Feb	15	Research proposal (max. 1500 words) Short summary of proposed research topic and work plan	1,4
A2.0	7 May	15 Feb	60	Minor Thesis (max- 10000) A series of arguments combined with the description and discussion of research undertaken.	3-5
A3.0	28 May	17 May	15	Revised Final Minor Thesis (max – 10000)	3-5
A4.0			10	Overall research progress and meetings	1-5

### 5.2 Assignment Requirements

#### **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 9:00am 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: < [www.mining.unsw.edu.au/information-about/our-school/policies-procedures-guidelines](http://www.mining.unsw.edu.au/information-about/our-school/policies-procedures-guidelines) >.
- In particular, the student should make sure they have read and understood the:
  - Declaration of Academic Integrity;
  - Assignment Submission requirements detailed in the *University Policies* section of the Course Outline; and
  - School Policy on *Assignment Submission* available on the School's website (the web address is given in the Course Outline). 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\_MINE8440\_A01.pdf > which elements correspond to:
  - Family name of student: Smith
  - Initial(s) of student: PD
  - Course Code: MINE8440
  - Assignment number: A01...as defined in the Course Outline for the assessment task
  - File format: PDF document

## **5.3 Assignment 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 four assessment items: research proposal, progress report, Minor Thesis and overall research progress and meetings. Assessment items will be graded:

- **Research proposal:** Assessment will be completed by the student's Project Supervisor.

- Progress report: Assessment will be made by the student's Project Supervisor.
- **Minor Thesis:** Assessment will be carried out by two academics in the School. The student's Project Supervisor may be an examiner.
- Overall research progress and meetings. Assessment will be undertaken by the student's Project Supervisor

In general, it is strongly recommended that a student should arrange to consult with their Project Supervisor on a regular basis to discuss project progress, options and future direction and, issues that may potentially impact performance and/or project completion.

#### 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

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

### 6.1 Research Project Proposal

The report is a short summary (approx 1500 words) of proposed research topic and work plan. It should include:

- Description of research topic
- Project objective (s)
- Brief background statement and potential benefits to mining industry
- Evidence of mining industry support, data availability and agreement to publish aggregated results
- Research methodology/approach
- Expected outcomes/deliverables
- Research plan and timelines
- Project risk assessment
- Draft Table of Contents for final project report

## Assessment Criteria – Research Project Proposal

Criteria	Excellent	Good	Satisfactory	Unsatisfactory	Poor	nil
<b>Quality of proposal</b>	<ul style="list-style-type: none"> <li>• proposal contains all essential elements including                             <ul style="list-style-type: none"> <li>○ well defined Project Objectives and Expected Outcomes; and</li> <li>○ a clear description of the research elements associated with the project; and</li> <li>○ evidence of preliminary background reading on the topic; and</li> </ul> </li> <li>• in the form of a formal report that was written and presented to a professionally high standard and conformed entirely with RWG in terms of format, structure and style; and,</li> <li>• all referencing and references were correct and in total accord with AusIMM referencing requirements as defined in the GTA and RWG; and</li> <li>• total word count was not less than 750 and did not exceed 1500 words.</li> </ul>	<ul style="list-style-type: none"> <li>• proposal contains most essential elements including                             <ul style="list-style-type: none"> <li>○ a generally well defined Project Objectives and Expected Outcomes;</li> <li>○ a clear description of the research elements associated with the project;</li> <li>○ evidence of some preliminary background reading on the topic; and</li> </ul> </li> <li>• in the form of a formal report that was well written and presented and conformed entirely with RWG; and,</li> <li>• all referencing and references were correct and in total accord with AusIMM referencing requirements as defined in the GTA and RWG; and</li> <li>• total word count was not less than 750 and did not exceed 1500 words.</li> </ul>	<ul style="list-style-type: none"> <li>• proposal contains many essential elements including                             <ul style="list-style-type: none"> <li>○ a vaguely defined Project Objectives and Expected Outcomes;</li> <li>○ a description of the research elements;</li> <li>○ little or no evidence of preliminary background reading on the topic; and</li> </ul> </li> <li>• in the form of a formal report that conformed in most respects with RWG with only a few very minor exceptions and</li> <li>• all referencing and references were correct and in accord with AusIMM referencing requirements as defined in the GTA and RWG with only a few very minor exceptions; and</li> <li>• total word count was not less than 500 and did not exceed 1000 words.</li> </ul>	<ul style="list-style-type: none"> <li>• proposal lacks many of the essential elements with                             <ul style="list-style-type: none"> <li>○ poorly defined Project Objectives and Expected Outcomes;</li> <li>○ poorly defined or incomplete description of the research elements;</li> <li>○ no evidence of preliminary background reading on the topic; and/or</li> </ul> </li> <li>• in the form of a formal report but contained many minor exceptions to RWG; and/or</li> <li>• many errors in referencing and/or references were not correct and were not in accord with AusIMM referencing requirements as defined in the GTA and RWG; and/or</li> <li>• total word count was less than 500 words.</li> </ul>	<ul style="list-style-type: none"> <li>• proposal does not contain most of the essential elements with                             <ul style="list-style-type: none"> <li>○ little/no defined Project Objectives and Expected Outcomes;</li> <li>○ missing description of the research elements;</li> <li>○ no evidence of preliminary background reading on the topic; and/or</li> </ul> </li> <li>• was not presented in form of a formal report and/or contained major non-conformance issues with RWG; and/or</li> <li>• majority of referencing and/or references were not correct and were not in accord with AusIMM referencing requirements as defined in the GTA and RWG; and/or</li> <li>• total word count was less than 250 words.</li> </ul>	<ul style="list-style-type: none"> <li>• no proposal submitted; and/or</li> <li>• not submitted on time; and/or</li> <li>• was not consistent with requirements of a formal report in terms of format, structure and style and/or contained major non-conformance issues with RWG; and/or</li> <li>• missing sections from report; and/or</li> <li>• no in-text citation in main body of report of information sources used; and/or</li> <li>• no References section; and/or</li> <li>• incorrect system of citing references with respect to RWG; and/or</li> <li>• did not conform with AusIMM referencing requirements as defined in the GTA and RWG; and/or</li> <li>• did not conform with assignment submission requirements; and/or</li> <li>• did not have attached an Assignment Coversheet and/or a completed self-assessment form.</li> </ul>
	10      8.5	8.0      7.5	7.0      5.0	4.5      3.0	2.5      0.5	0

### 6.2 Minor Thesis

The thesis should be ordered; critical and reasoned exposition of knowledge gained through the student's efforts and include evidence of awareness of the literature. Minor thesis should be approximately 10,000 words excluding appendices, tables and illustrative matter.

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 are summarised in the following table.

### Assessment Criteria – Minor Thesis

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

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

<b>Criteria</b>	<b>Excellent</b>		<b>Good</b>		<b>Satisfactory</b>		<b>Unsatisfactory</b>		<b>Poor</b>		<b>nil</b>
	10	9	8	7	6	5	4	3	2	1	0
<b>Referencing</b>	<ul style="list-style-type: none"> <li>• <b>all in-text citations were correct</b> as per the RWG; and</li> <li>• <b>all sources</b> of information were <b>referenced</b>; and</li> <li>• <b>all listings</b> in the <b>References</b> section were <b>correct</b> and exactly in total accord with AusIMM referencing requirements as defined in the GTA and RWG; and</li> <li>• there were <b>no references missing</b> from the References section</li> </ul>										
	<ul style="list-style-type: none"> <li>• majority of in-text citations were correct with only a few minor errors; and</li> <li>• majority of sources of information were referenced with only a few minor exceptions; and</li> <li>• 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</li> <li>• there was only one reference missing from the References section</li> </ul>										
	5		4		3		2		1		0

<b>Criteria</b>	<b>Excellent</b>	<b>Good</b>	<b>Satisfactory</b>	<b>Unsatisfactory</b>	<b>Poor</b>	<b>nil</b>
<b>Standard of thesis presentation</b>	<ul style="list-style-type: none"> <li>• <b>structure of thesis contains all required sections</b> and follows standard order of presentation progression for a thesis in accord with <i>RWG</i></li> <li>• structure follows a logical progression</li> <li>• <b>format of is completely in accord</b> with the report writing conventions detailed in <i>RWG</i></li> <li>• use of <b>tables, figures and equations is correct</b> and completely in accord with the <i>RWG</i> with no errors</li> <li>• <b>writing style is appropriate</b> and completely in accord with a thesis</li> <li>• <b>no spelling and grammatical errors etc</b></li> </ul>	<ul style="list-style-type: none"> <li>• structure is complete though it has a few minor errors</li> <li>• format is largely in accord with <i>RWG</i> with only a few minor errors</li> <li>• use of tables, figures and equations is largely correct with only a few minor errors</li> <li>• style is largely appropriate for a technical report with a few minor exceptions</li> <li>• largely free of spelling and grammatical errors</li> </ul>	<ul style="list-style-type: none"> <li>• structure is mostly correct and/or has some minor errors</li> <li>• format is mostly in accord with the <i>RWG</i> though it has some minor errors</li> <li>• use of tables, figures and equations is mostly correct though there are several minor errors</li> <li>• style is appropriate in most instances with some minor errors</li> <li>• several minor spelling and grammatical errors</li> </ul>	<ul style="list-style-type: none"> <li>• several issues with structure and/or many minor errors and/or omissions</li> <li>• many issues with format of thesis as it deviates from <i>RWG</i></li> <li>• some issues with use of tables, figures and/or equations</li> <li>• writing style is inappropriate in some instances</li> <li>• many instances of spelling and/or grammatical errors</li> </ul>	<ul style="list-style-type: none"> <li>• significant issues with structure and/or many major errors and significant omissions</li> <li>• large number of significant major issues in format</li> <li>• use of tables, figures and/or equations is largely inconsistent with <i>RWG</i></li> <li>• writing style is inappropriate in many instances</li> <li>• large number of spelling and/or grammatical errors</li> </ul>	<ul style="list-style-type: none"> <li>• information not presented in a form expected in a research thesis and/or not compliant with <i>RWG</i></li> <li>• most essential elements of structure are missing</li> <li>• thesis has no logical structure</li> <li>• significant amount of information is missing</li> <li>• format not in accord with the <i>RWG</i> standards</li> <li>• use of tables, figures and/or equations is incorrect</li> <li>• inappropriate writing style for a research thesis</li> <li>• major issues /numerous spelling and/or grammar errors</li> </ul>
	10      9	8      7	6      5	4      3	2      1	0

### 6.3 Overall Progress

The overall assessment is based on the student’s Project Supervisor interactions with the student at their regular meetings and other modes of oral and written communication.

By the end of the research project the student should be able to demonstrate:

- Understanding of the project and supporting literature.
- Ability to perform research-oriented tasks including conducting experiments, analysing results and synthesize research findings.
- Ability to undertake research independently.
- Research findings in written and verbal forms.
- Project management skills.

### 7.1 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>

### 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.microsoftcrmportals.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](http://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](http://www.moodle.telt.unsw.edu.au)

## 7.5 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 as described previously.

## 7.6 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.

## 7.7 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](http://www.student.unsw.edu.au/special-consideration)

## 7.8 Course Results

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

## 7.9 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/](http://www.studentequity.unsw.edu.au/)

## 7.10 Academic Honesty and Plagiarism

Your lecturer and the University will expect your submitted assignments are truly your own work. UNSW has very clear guidelines on what plagiarism is and how to avoid it. Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. The University has adopted an educative approach to plagiarism and has developed a range of resources to support students. All the details on plagiarism, including some useful resources, can be found at [www.student.unsw.edu.au/plagiarism](http://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/](http://www.lc.unsw.edu.au/). The Learning Centre is designed to help you improve your academic writing and communication skills. Some students use the Centre services because they are finding their assignments a challenge, others because they want to improve an already successful academic performance.

## 7.11 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.



## 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.**

MINE8440 Mining Industry Research Project 1, T1 2021