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# 1. INFORMATION ABOUT THE COURSE

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

Course Convenor:	Dr Seher Ata		
Contact Details	Resources Engineering	EMAIL:	<u>s.ata@unsw.edu.au</u> ,
		Phone:	+61 2 9385 7659

# 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.

### 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. 6<sup>th</sup> edition (John Wiley & Sons) The Research Project – How to Write It, 2000. R Berry, 4<sup>th</sup> 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	Торіс	Content/Activities
1			
2			
3			
4			
5			
6			
7			
8			A0.1_Project Presentation
9			

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

		Release date	Weight	Assessment	Learning outcomes assessed
A01	21 July	1 June	15%	<b>Presentation</b> (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 Teter 9.93TTOW 12.6950 (8 di)-90ed ( o)-5.4w(d	o)-12.(es)-8 t ( ar112.2

# What

The submission must be:

- o 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:

- o to the front, a signed copy of the Student Declaration Form and Coversheet; and
- $\circ$   $\,$  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 < 520 at 12P.10\_1441 a 21 promates (6 E.12/16 at 1 day 0.42)

### 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 Asses0 0 12 177.84 670.44 Tm [(Ta)-5 (bl)-3 (e(87

MINE8445: Mining Industry Research Project II, T2 2020

Criteria	Excellent	Good	Satisfactory	Unsatisfactory	Poor	nil
Results and analysis	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	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	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.	some results are presented and some analysis and interpretations of these results are given not aligned to the stated objectives of the research.	poorly presented some results and/or some results missing little or no analysis or interpretation of results	no results presented and/or analysed

MINE8445: Mining Industry Research Project II, T

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

	· · · · · · · · · · · · · · · · · · ·				
Criteria	Excellent	Good	Satisfactory	Unsatisfactory	Poor
Title, Abstract & Introduction	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	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	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	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	of the Paper or is missing Abstract poorly structured with key information missing Introduction provides the reader with very little background to the topic
	20 19	18 15	14 10	9 5	4 1
Methodology and/or experimental procedures	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	Paper provides the reader with reasonable description of the research methodology and/or any experimental procedure that was used to obtain data	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	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	Paper provides the reader with a limited description of the research methodology and/or any experimental procedure that was used to obtain data

Assessment Criteria – Conference Paper

Criteria	Excellent	Good	Satisfactory	Unsatisfactory	Poor	nil
Layout and standard of Paper	Paper adheres to AusIMM's Guide to Authowsith 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	Paper adheres to AusIMM's Guide to Authowith 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	some errors	Paper partially adheres to AusIMM's Guide to Authowith 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	Paper does not adhere to AusIMM's Guide to Authowith 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	Unable to read paper
	10 9	8 7	6 5	4 3	2 1	0

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

Criteria	Excellent	Good	Satisfactory	Unsatisfactory	Poor	nil
Quality of consultation	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	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	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	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	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	lack of any meaningful consultation by student with academic supervisor
	5	4	3	2	1	0

Assessment Criteria – Consultation with Supervisor

#### 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: <u>https://student.unsw.edu.au/email-rules</u>

# 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).

#### 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.