UNSW Course Outline

MINE8445 Mining Industry Research Project 2 - 2024

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General Course Information

Course Code : MINE8445
Year : 2024
Term : Term 2
Teaching Period : T2
Is a multi-term course? : No
Faculty : Faculty of Engineering
Academic Unit : School of Minerals & Energy Resources Engineering
Delivery Mode : Online
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course is for postgraduate Masters coursework students further to extend their research capabilities with a mining industry collaborator, extending the 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 robust solution, safe, cost-effective and appropriate to the end user.

It is essential that this foundation reflects not only established thinking and practices but also, equally important, accounts 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 this course 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 examiner copy of the 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 the agreement of an academic supervisor in the School in order to complete the course requirements. Please contact the School if more information is required.

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.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Design and assemble appropriate resources necessary to support the research investigation.
CLO2 : Collate and analyse results of investigation.
CLO3 : Formulate relevant conclusions and recommendations against the project objectives.
CLO4 : Present the research results in the form of a thesis dissertation and presentation.
CLO5 : Prepare a document to the standards required for a conference hosted by Australian Institute of Mining and Metallurgy (AusIMM), or similar relevant professional body.

Course Learning Outcomes	Assessment Item
CLO1 : Design and assemble appropriate resources necessary to support the research investigation.	• Consultation with supervisor • Examiners copy of thesis and conference paper
CLO2 : Collate and analyse results of investigation.	• Consultation with supervisor • Examiners copy of thesis and conference paper
CLO3 : Formulate relevant conclusions and recommendations against the project objectives.	• Revised Thesis • Consultation with supervisor • Examiners copy of thesis and conference paper
CLO4 : Present the research results in the form of a thesis dissertation and presentation.	• Presentation on research project and outcomes • Revised Thesis • Examiners copy of thesis and conference paper
CLO5 : Prepare a document to the standards required for a conference hosted by Australian Institute of Mining and Metallurgy (AusIMM), or similar relevant professional body.	• Examiners copy of thesis and conference paper

Learning and Teaching Technologies

Moodle - Learning Management System

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Consultation with supervisor Assessment Format: Individual	10%	Start Date: Not Applicable Due Date: Not Applicable
Presentation on research project and outcomes Assessment Format: Individual	15%	Start Date: 27/05/2024 12:00 AM Due Date: 05/07/2024 12:00 AM
Examiners copy of thesis and conference paper Assessment Format: Individual	60%	Start Date: 27/05/2024 12:00 AM Due Date: 02/08/2024 12:00 AM
Revised Thesis Assessment Format: Individual	15%	Start Date: 16/08/2024 12:00 AM Due Date: 23/08/2024 12:00 AM

Assessment Details

Consultation with supervisor

Assessment Overview

The overall assessment is based on the student's Project Supervisor's 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 synthesising research findings.
- Ability to undertake research independently.
- Research findings in written and verbal forms.
- Project management skills.

Course Learning Outcomes

- CLO1 : Design and assemble appropriate resources necessary to support the research investigation.
- CLO2 : Collate and analyse results of investigation.
- CLO3 : Formulate relevant conclusions and recommendations against the project objectives.

Assignment submission Turnitin type

Not Applicable

Presentation on research project and outcomes

Assessment Overview

Students are tasked with presenting an oral exposition based on their ongoing research project. This platform allows them to exhibit their discoveries, insights, and the depth of their comprehension regarding the subject. The objective is to proficiently convey their research outcomes, methodologies utilised, conclusions drawn to date, and outline forthcoming work. This presentation may take the form of a pre-recorded video or a live webinar. Feedback will be furnished during the presentation if it is delivered live, and post-presentation if it is submitted as a recorded video.

Course Learning Outcomes

- CLO4 : Present the research results in the form of a thesis dissertation and presentation.

Assessment Length

20 mins

Assignment submission Turnitin type

Not Applicable

Examiners copy of thesis and conference paper

Assessment Overview

The thesis constitutes a series of well-structured arguments complemented by a comprehensive description and discussion of the research undertaken. Furthermore, students are required to prepare a conference paper derived from the thesis. The primary purpose of this conference paper is to communicate the key aspects of the research project, encompassing its background, objectives, methodology, results, analysis, and conclusions. Constructive feedback will be supplied within a minimum of two weeks following the submission.

Course Learning Outcomes

- CLO1 : Design and assemble appropriate resources necessary to support the research investigation.
- CLO2 : Collate and analyse results of investigation.
- CLO3 : Formulate relevant conclusions and recommendations against the project objectives.
- CLO4 : Present the research results in the form of a thesis dissertation and presentation.
- CLO5 : Prepare a document to the standards required for a conference hosted by Australian Institute of Mining and Metallurgy (AusIMM), or similar relevant professional body.

Assessment Length

max 15000 words

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Revised Thesis

Assessment Overview

Upon receiving their revised thesis from the reviewers, students are required to review the content of their thesis and incorporate revisions in response to the comments and feedback provided.

Course Learning Outcomes

- CLO3 : Formulate relevant conclusions and recommendations against the project objectives.
- CLO4 : Present the research results in the form of a thesis dissertation and presentation.

Assessment information

Once the minor thesis is examined by reviewers, students should revise their thesis accordingly and include the points raised by the reviewers. The template below should be used to record the revisions made to the thesis. The template along with two copies of the revised theses (one showing the changes made and the other clean) should be submitted online to the designated dropbox. Examiner comments (please reproduce exactly as in the examiner report) Response (include text/figures added to the revised thesis; use a different colour to identify the new text in the thesis) Section / Page (in original thesis) Section / Page (in revised thesis) Reviewer's Comment (if applicable)

Assignment submission Turnitin type

Not Applicable

General Assessment Information

Grading Basis

Standard

Course Schedule

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Course Resources

Prescribed Resources

- 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)

Recommended 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

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Seher Ata			61478492034		No	Yes

Other Useful Information

Academic Information

I. Special consideration and supplementary assessment

If you have experienced an illness or misadventure beyond your control that will interfere with your assessment performance, you are eligible to apply for Special Consideration prior to, or within 3 working days of, submitting an assessment or sitting an exam.

Please note that UNSW has a Fit to Sit rule, which means that if you sit an exam, you are declaring yourself fit enough to do so and cannot later apply for Special Consideration.

For details of applying for Special Consideration and conditions for the award of supplementary assessment, please see the information on UNSW's Special Consideration page.

II. Administrative matters and links

All students are expected to read and be familiar with UNSW guidelines and polices. In particular, students should be familiar with the following:

- Attendance
- UNSW Email Address
- Special Consideration
- Exams
- Approved Calculators
- Academic Honesty and Plagiarism
- Equitable Learning Services

III. Equity and diversity

Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course convener prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equitable Learning Services. Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.

IV. Professional Outcomes and Program Design

Students are able to review the relevant professional outcomes and program designs for their streams by going to the following link: https://www.unsw.edu.au/engineering/student-life/student-resources/program-design.

Note: This course outline sets out the description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published.

Moodle or your primary learning management system (LMS) should be consulted for the up-to-date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline/Moodle/LMS, the description in the Course Outline/ Moodle/LMS applies.

Academic Honesty and Plagarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off 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. UNSW has produced a website with a wealth of resources to support students to understand and avoid plagiarism, visit: student.unsw.edu.au/plagiarism. The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one.

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis or contract cheating) even suspension from the university. The Student Misconduct Procedures are available here:

www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

Submission of Assessment Tasks

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of five percent (5%) of the maximum mark possible for that assessment item, per calendar day.

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day. This is for all assessments where a penalty applies.

Work submitted after five days (120 hours) will not be accepted and a mark of zero will be awarded for that assessment item.

For some assessment items, a late penalty may not be appropriate. These will be clearly indicated in the course outline, and such assessments will receive a mark of zero if not completed by the specified date. Examples include:

- Weekly online tests or laboratory work worth a small proportion of the subject mark;
- Exams, peer feedback and team evaluation surveys;
- Online quizzes where answers are released to students on completion;
- Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date; and,
- Pass/Fail assessment tasks.

Faculty-specific Information

Engineering Student Support Services – The Nucleus - enrolment, progression checks, clash requests, course issues or program-related queries

Engineering Industrial Training – Industrial training questions

UNSW Study Abroad – study abroad student enquiries (for inbound students)

UNSW Exchange – student exchange enquiries (for inbound students)

UNSW Future Students – potential student enquiries e.g. admissions, fees, programs, credit transfer

Phone

(+61 2) 9385 8500 – Nucleus Student Hub

(+61 2) 9385 7661 – Engineering Industrial Training

(+61 2) 9385 3179 – UNSW Study Abroad and UNSW Exchange (for inbound students)

School-specific Information

Course completion

Course completion requires submission of all assessment items. Failure to submit all assessment items may result in the award of an Unsatisfactory Failure (UF) grade for the Course unless special consideration has been submitted and approved.

Submission of Assessment Tasks

We encourage you to retain a copy of every assignment submitted for your own record, either in hardcopy or electronic form. All assessments must have an assessment cover sheet attached (if required).

Student Resources

The School has student resources section, containing useful advice and information to ensure you're able to focus on your studies.

Computing Resources and Internet Access Requirements

UNSW Minerals and Energy Resources Engineering provides blended learning using the online Moodle LMS (Learning Management System). Also see - Transitioning to Online Learning: www.covid19studyonline.unsw.edu.au

Note that some specialist engineering software is not available for Mac computers.

- Mining Engineering Students: OMB G48
- Petroleum Engineering Students: TETB LG34 & LG35

For more information about system requirements is available at www.student.unsw.edu.au/moodle-system-requirements

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

School Contact Information

School of Minerals and Energy Resources Engineering
Old Main Building, Level 1, 159 (K15)
UNSW SYDNEY NSW 2052 AUSTRALIA

For current students, all enquiries and assistance relating to enrolment, class registration, progression checks and other administrative matters, please see The Nucleus: Student Hub.

Web & Important Links:

School of Minerals and Energy Resources
The Nucleus Student Hub
Moodle
UNSW Handbook
UNSW Timetable
Student Wellbeing
Urgent Mental Health & Support
Equitable Learning Services