

MINE8710 - 6UOC
Mine Slope Stability
T3 2020

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1. INFORMATION ABOUT THE COURSE

Course Code: MINE8710

Semester:

2. AIMS, LEARNING OUTCOMES AND GRADUATE ATTRIBUTES

2.1. Course Aims

This course aims to equip the student with knowledge and skills to design appropriate slope for surface mining applications.

2.2. Learning Outcomes

It is intended that students will be able to:

1. Understand the basic mechanical properties of rock and how these are applied to analyse problems in mine slope stability.
2. Have a sound working knowledge of fundamental mechanisms and geotechnical principles within the context of practical surface mining applications;
3. Recognise the role and importance of these principles in a comprehensive range of surface mining applications, both from a technical perspective, and from the risk and operational management perspective.
4. Have a broad knowledge of key numerical methods used in mine slope designs

2.3. Teaching Strategies

This course will be delivered mainly through formal lectures with a combination of active learning tutorials. Several lecturers from industry will present different topics. The student will also have an opportunity to participate in a field trip.

2.4. Graduate Attributes

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

- appropriate technical knowledge
- having advanced problem solving, analysis and synthesis skills with the ability to tolerate ambiguity
- ability for engineering design and creativity
- being able to think and work individually and in teams
- listening, influencing, motivating and communication skills
- being able to work and communicate effectively across discipline boundaries
- having HSEC consciousness
- being active life-long learners.

3. REFERENCE RESOURCES

3.1. Reference Materials

There are no prescribed texts for this course. However, the following references may be of assistance, as are a range of industry and professional journals.

Guidelines for Open Pit Slope Design. J Read & P Stacey CSIOR (2008)

Guidelines for Evaluating Water in Pit Slope Stability. G Beale & J Read CSIRO (2013)

Rock Mechanics and the Design of Structures in Rock. L Obert & WI Duvall, John Wiley & Sons (1967)

Fundamentals of Rock Mechanics, JC Jaeger & NGW Cook, Chapman & Hall (1979).

Rock Fracture Mechanics. BN Whittaker, RN Singh & G Sun, Elsevier (1992).

Geotechnical Instrumentation and Monitoring in Open Pit and Underground Mining. T Szwedzicki (ed.), AA Balkema (1993).

Rock Slope Engineering. E Hoek & JW Bray, Inst. of Mining & Metallurgy, London (1994).

ISRM Online Journals

(Note: This is not intended to be a complete list, but a guide only.)

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6. 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: <http://www.cloudemail.unsw.edu.au/>

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:

