



29 May–02 June 2017

Presented by the Department of Mining Engineering, University of Pretoria

29 May–02 June 2017

This short course covers the basics and key elements of **Open Pit Mine Planning and Design** starting at the geological resource model, through to the reserve statement and including all aspects of the value chain.

This unique course enables you to learn the basic theory of open pit mine design and the application thereof, whilst having the chance to interact with experts in the field. The course is comprehensive and is based on both the undergraduate and postgraduate Surface Mine Design Engineering courses presented in the Mining Engineering degree programmes at the University of Pretoria.

Open Pit Cycle



NEXT PAGE

Shifting knowledge to insight



Open Pit Mine Planning and Design

Presented by the Department of Mining Engineering, University of Pretoria

Course content

The value chain incorporated into the course consists of:

- Geological resource, drill samples, ore body models and block modelling
- Pit optimisation
- Physical pit design
- Equipment optimisation and requirements
- Production schedule
- Mining cost modelling, mining capex and opex
- Reserve statement

Sub-topics, incorporated into the value chain, discussed during the course will include the following:

- Key factors to consider in pit design and design criteria
- Modelling techniques and calibration
- Drilling and blasting for stable pit walls
- Mine water risk in slope stability
- Monitoring and maintaining open pit slopes
- Assessing the risks with open pit mining

Learning outcomes

After successful completion of the course, you will have a better understanding of the open pit mine planning process.

The detailed outcomes would be reached as presented in the industry syllabus, however on a broader base, the course will be aimed at developing the candidate's abilities in the six cognitive levels: knowledge, comprehension, application, analysis, synthesis and evaluation. Thus, when being examined on the topics detailed in this syllabus, candidates would be able to demonstrate their capacity for:

- Comprehending and understanding the general Open Pit Planning and Design engineering principles covered in this syllabus and applying these to real orebodies and optimising the mine designs.
- Applying fundamental scientific knowledge, comprehension and understanding to predict the behaviour of mine layouts in terms of the different types of risks in real world mining environments.
- Performing creative procedural design and synthesis of short term planning and support systems to control and influence production scheduling processes.
- Understanding the greater picture in the total value chain process and the overall evaluation thereof.
- Communicating, explaining and discussing the reasoning, methodology, results and ramifications of all the above aspects in a professional manner at all levels.

Who should enrol?

This course is ideal for:

- Mining Engineers
- Planning Engineers
- Geotechnical Engineers

- Surveyors
- Drill and Blast Engineers
- Mine Managers
- Operation Managers
- Auditors

Course fees

R16 450.00 per delegate (VAT incl.)

Course fees include all refreshments and course material during contact days.

Course fees must be paid in full 14 days prior to course start dates. Proof of payment can be submitted to enrolments@enterprises.up.ac.za.

Admission requirements

Prospective delegates should at least have

- a tertiary mining qualification
- an understanding of the mine layout, and
- 4 years' work experience or prior mining work experience.

Accreditation and certification

Enterprises University of Pretoria (Pty) Ltd is wholly owned by the University of Pretoria. The University is registered as a multipurpose, public training provider in the higher education and training band. Delegates who successfully complete a course and comply with the related assessment criteria are awarded certificates by the University in recognition of their professional skills development.

Registration and enquiries

Course coordinator

Mpolokeng Rammutloa

Tel: +27 (0)12 434 2607

Cell: +27 (0)78 784 8832

Email: mpolokeng.rammutoa@enterprises.up.ac.za

Course leader

Wolter de Graaf

Department of Mining Engineering

Tel: +27 12 420 2604

Email: wolter.degraaf@up.ac.za

Shifting knowledge to insight

 www.enterprises.up.ac.za

 +27 (0)12 434 2500  +27 (0)12 434 2505  info@enterprises.up.ac.za  Private Bag X41, Hatfield, 0028

For quotations on in-house training, email quote@enterprises.up.ac.za