

EXPLOSIVES ENGINEERING FOR SURFACE AND UNDERGROUND MINES

MINN0140

25th – 29th March 2019



School of Mining Engineering

Introduction

This 5-day certificated course discusses the role of explosives engineering in the mining industry. The focus will be on surface and underground mines which will include surface coal mines. The use of explosives in underground coal mines will not be covered.

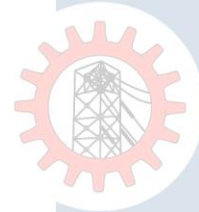
Objectives

The objective of this course is to provide the participants with the knowledge of explosives engineering that will enable them to understand the factors involved in the fracturing of rock with explosives. This should enable the participants to design blasts, identify problems with the current blasting operations thereby enabling improvements in blast results while taking into account the mines productivity and profitability.

Structure of the course

The course is divided into 9 units.

- Unit 1 discusses the chemistry of explosives and the physics of detonation of explosives.
- Unit 2 explains the mechanism of rock breaking with explosives
- Unit 3 describes the different generic types of explosives.
- Unit 4 goes into the physical properties of explosives.
- Unit 5 describes the different initiation systems.
- Unit 6 covers the principles of blast designs for surface mines.
- Unit 7 covers the principles of blast designs for tunnelling.
- Unit 8 covers the principles of blast design for stoping of various mining methods.
- Unit 9 discusses the evaluation of blast results and problem solving.



Method of assessment

This course is a NQF level 6 certificated course and students are required to successfully satisfy the following course assessments in order to obtain a certificate of competence:

- A written examination which will take place 2 weeks after the course (15th April 2019)
- An assignment to be submitted six weeks after the last day of the course (10th May 2019)

Who should attend this course

The course should be particularly relevant to:

- Mining Engineers
- Explosives Engineers
- Explosives Technicians
- Drill and Blast Superintendents
- Rock Engineers

Registration

To register for this course please contact the Course Coordinator Mrs L Dabrowski whose contact details are:

Telephone 011 717 7430

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