



Professional Development Training

ENHANCING HUMAN CAPITAL



The mining industry worldwide has seen a significant rise in commodity prices which is making previously uneconomic deposits look more attractive. There is now considerable activity in relation to project

valuations and revaluation of assets with respect to holding values, fair purchase prices, and amortisation schedules. Similarly the change in economics has created capability for major operational expansions and doubling the size of existing operations is a sign of the times. Again, the number of pieces of equipment, pits, types of ore, production options, blending issues and overall logistics make manual solutions near impossible and completely inefficient.

Full disclosure, accuracy and transparency are a must in today's corporate reporting environment. This need for accuracy and transparency combined with the sheer size of amalgamated operations and consolidated reporting requirements, means more sophisticated systems are needed. MRM/Runge's systematic mine planning processes provide ideal tools for undertaking this work.



We have developed short courses aimed specifically at addressing these issues.

The courses offered are:

- Mining for Non Miners (1 day)
- Mining Economics (2 days)
- Intergrated Open Pit Design (5 days)
- Planning and Operation of Truck and Loader Mining Systems (2 days)
- Planning and Operation of Dragline Mining Systems (2 days)

The material for the courses is based on studies performed by MRM/Runge for mining companies worldwide. All courses include workshops, lectures, and multi-media presentations.

Mining for Non Miners is a newly developed course particularly relevant to those who are new to the industry or who work on the periphery of the mining industry. This course teaches a basic understanding of mining terminology and methods of mining. A popular course intended to give an overview of the industry for newcomers to mining.

In today's mining industry cost awareness is crucial to survival of companies. With this in mind, the **Mining Economics Course** focuses on the costs and other financial issues which are important to the mining industry.

The **Design of Integrated Open Pit Coal Mines Course** has incorporated in it the operational techniques with different equipment and the way these pieces of equipment interact. Specifically, the following topics are covered:

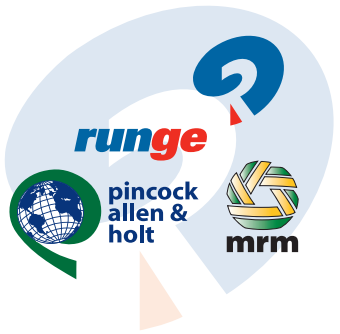
- Systematic Mine Planning
- Draglines
- Trucks and Loaders
- Mine Scheduling
- Mining Economics
- Mine Strategies

The **Planning and Operation of Truck and Loader Mining Systems Course** presents

planning and operational methods of truck and loader mining systems. The course is designed for managers, engineers, geologists, scientists, and operators involved with or interested in, truck and loader operations.



The **Dragline Mining Systems Course** addresses issues to deal with the changing industry and the need to improve one's cost position. It presents planning and operational methods of dragline mining systems, and is intended for managers, engineers, geologists, scientists, and operators involved with, or having interest in, dragline operations.



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The course has recently been restructured to include more aspects of efficient mine planning such as integrated mine design with trucks and shovel and other equipment, mine scheduling, blending, and cast blasting. Recent case studies prepared for open pit mines are also included.

Broad-Based Black Economic Empowerment (BBBEE)

The range of Professional Development courses offered by MRM/Runge are designed to address specific skills development of previously disadvantaged people in the mining industry with a particular emphasis on entry-level technical and management training. The courses will help to expand the employment potential and absorption capacity of the mining sector in South Africa and will contribute towards the attainment of employment equity targets by large mining organisations.

Applied effectively, the training can be used to:

- ✓ Promote the achievement of the constitutional right to equality
- ✓ Increase broad-based and effective participation of previously disadvantaged people in the mining industry
- ✓ Generate a higher rate of growth in mining and related sectors.
- ✓ Increase entry-level employment in mining
- ✓ Achieve more equitable income distribution in mining
- ✓ Provide cross-training to help alleviate the acute skills shortage in the mining industry worldwide



Course Features

All MRM/Runge courses involve the use of mining equipment literature and the use of software where appropriate for productivity calculations.

In particular:

- Attendees will be actively involved in all work shops and case studies. By the end of the course attendees will have practical solutions to many real life mining problems.
- A constant theme involves engineering decisions based on costs. As costs change, the answers to mining problems change.
- Strong emphasis on computer applications where appropriate using the computer as a tool to solve mining problems. The techniques are simple to understand and apply.
- Participants are encouraged to bring forward discussion on any particular problems or important design constraints at their mine site.

Examples, case studies and multi-media presentations are drawn from MRM/Runge's direct involvement in studies worldwide.

Knowledge of world trends in the industry will enable you to operate your mine profitably despite major changes in operating conditions throughout its life.

MRM/Runge's strong business focus is integral to all our software systems - this translates into the development of tools which allow detailed modeling of scenarios for business analysis.

Let us share our many years of mining experience with you via our Professional Development Programs.

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