



**SOOFASTAEI**  
EDUCATIONS



# Hauling Operation Improvement

(Productivity, Maintenance, Safety, Energy Efficiency)

## Details

- 4 Sessions
- 4 Modules
- 12 Hours

## CONTACT US



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## PROGRAM OVERVIEW

Hauling operation is one of the key processes in surface mining. The performance of this operation affects other upstream and downstream mining activities. Therefore, any optimization in this operation can benefit mine owners in different aspects such as energy efficiency, productivity, operation cost, safety, and maintenance program.

This program helps mine managers, supervisors, and operators to get familiar with the concept of hauling optimization methods. The practical advice and technical recommendations designed to deliver in this program can potentially make a new roadmap dedicated to improving the surface mines' hauling operations.

## KEY BENEFITS

The Program is aimed at providing:

- ✔ Deep understanding about the modern hauling operation in surface mines;
- ✔ Finding the clear relationship between the hauling operation and other mining activities;
- ✔ Evaluating the potential opportunities to increase the hauling performance;
- ✔ Getting familiar with the available modern approaches to improve the energy efficiency in hauling operation;
- ✔ Assessing the energy improvement alternatives to reduce the fuel consumption in hauling;
- ✔ Delivering Hauling safety related recommendations;
- ✔ Introducing the modern analytical models to improve the hauling operation performance; and

- Demonstrating a couple of current used computer applications to manage the hauling process.

## WHO SHOULD ATTEND THIS PROGRAM?

This course is designed for:

- ✔ Hauling operators
- ✔ Hauling supervisors
- ✔ Mine managers
- ✔ R&D managers
- ✔ Mine planners
- ✔ Project managers





## Agenda

### SESSION 1:

#### **Module 1:** **Surface Mining and Hauling Operation**

- Mining operations
- Underground mining operations
- Hauling operation in surface mines
- Mobile equipment in surface mines
- Mine – Move – Mill integrated process
- Hauling operation and Truck bunching problem

### SESSION 2:

#### **Module 2:** **Productivity and Energy Efficiency**

- Mine productivity
- The role of different mine operations in total productivity
- Reduce total mining cost – Strategies, Opportunities and Challenges
- Energy efficiency in mining



- Improve energy efficiency in hauling operation
- Minimize gas emissions in hauling operation
- Reduce haul truck fuel consumption



### SESSION 3:

#### **Module 3: Safety and Maintenance**

- Safety in hauling operation
- Predict and avoid mobile equipment accidents
- Hauling operators' standard guidelines
- Truck drivers smart coaching systems
- Predict equipment failures
- Optimize maintenance short-, medium-, and long-term programs
- Predict and minimize maintenance cost



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**SESSION 4:**

**Module 4: Case studies**

- Hauling operation improvement – BHP, Queensland, Australia
- Truck fuel consumption program – Vale, Vitoria, Brazil
- Integrated mine to mill optimization – RioTinto, Perth, Australia
- Mobile equipment components failure prediction – Peabody, Arizona, USA
- Smart coaching systems for truck drivers – BHP, Santiago, Chile





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