

## <별첨2> 강의 계획서

# 1 In scope

## 1.1 Open Pit Mine Planning (2 days)

The course commences with the fundamentals of open pit mine design, leading into a detailed examination of current industry practices to maximise safe economic return. Participants will learn about the open pit mine planning process in theory and practice, so they can apply this knowledge to plan new operations or plan and analyse existing mines.

Participants will learn about:

- The mine planning process, from optimisation to scheduling and the challenge of optimising mine schedules
- Practical advice on open pit mine design
- Open pit optimisation - Lerchs-Grossman optimisation software and its use
- Slope stability for mines and dumps – geotechnical, hydrogeology and hydrology issues
- Practical and theoretical open pit design – including ramp replacement and design.

## 1.2 Mine to Mill Grade Control and Mine Reconciliation (3 days)

### 1.2.1 Day 1 – Grade control techniques for open pit and underground mines; reduce misclassification through best practice grade control

Participants will learn:

- Best practice grade control sampling and data collection techniques
- The pros and cons of different sampling methods used for grade control
- The importance of good geological mapping
- To understand the concept of misclassification and how to minimise ore loss and dilution
- Good practice ore control processes in open pit and underground mines.

### 1.2.2 Day 2 – Grade control modelling; minimising misclassification through optimal estimation

Participants will learn:

- The implications of the selective mining unit (SMU) on misclassification
- Good practice for estimating the grade of ore blocks in open-pit and underground operations
- Which grade estimation techniques should be used and when
- To optimise the sampling grid for the SMU
- To gain an understanding of how conditional simulation can be used to assess grade risk

- About the use and benefits of geometallurgical modelling for grade control.

### **1.2.3 Day 3 – Mine reconciliation process; using the reconciliation process to increase profit margins**

Participants will learn:

- How to develop their own Reconciliation Code of Practice
- How to map material movements
- How to analyse components of the reconciliation process for your site, how they relate to each other and the key parameters used for reconciliation (inputs/outputs)
- To identify causes of inconsistencies and inefficiencies in order to implement improvement processes
- About the various stakeholders in the reconciliation process
- How to provide relevant and concise reconciliation information
- How to unlock value from reconciliation results for operational improvement
- About best practice reconciliation.