

Department: Mining Engineering

Division: Mining Exploration and Mineral Processing

Level and Major: BSc, Mining Exploration and Mineral Processing

Course Title: Underground Mining Methods

Number of Credits: 2

Prerequisite: Drilling Engineering+ Principles of Mining Methods

Lecturer: Dr. Kourosch Shahriar

Course Goals and Objectives

Acquiring essential abilities for doing underground excavation.

Course Topics

- Introduction of Lessons, Resources, Assessment and Introduction to the Mining Industry, History
- Different stages of mine work - prospecting and exploration - preparation - extraction - closing and closing of the mine
- Factors Affecting the Value of Mineral Resources
- Effective factors in preparing and selecting extraction methods
- Different stages of preparation
- Major workshops, service rooms, shunting systems, minor workshops and how to prepare workshops
- Estimating and Estimating the Dimensions of Mining Plots
- Determine the floor space and the division of the storage into panels, floors, and sections
- Calculate and estimate annual production
- Major and minor operations in the mines and extractive qualities
- Mining methods
- Open methods - Underground methods
- Unsafe methods
- Maintenance methods
- Destructive methods
- New methods
- Comparison of methods and selection of suitable methods according to geological conditions and geometry of ore deposit

Reading Resources

- An Introduction to Mining L. J THOMAS 1979, Australia
- Introduction to Mining, Bohuslav Stooce, 1956
- The Working of Mining Deposits G.POPOV, 1971
- Mining Engineering Handbook 1992 Hartman SME
- Coal Mine Ground Control, Peng. John Willey, New York, 1978
- Longwall Mining, SYD S. Peng, H. Schiang, John Wiley, USA, 1984
- Introductory Mining Engineering, H.L. Hartman, John Willey, 2002, 1987