

Department: Mining Engineering

Division: Tunneling and Underground Spaces

Level and Major: MSc, Tunneling and Underground Spaces

Course Title: Ground Control and Support System

Number of Credits: 2

Lecturer: Dr. Ebrahim Farrokh

Course Goals and Objectives

An introduction toward the various ground control and support systems and their design procedure.

Course Topics

- Ground support types
- Ground support design methods
- Empirical design methods
- Ground reaction curve
- Rock bolt
- Shot Crete
- Slope stability and ground reinforcement-steel support
- Concrete support

Reading Resources

- Support of underground excavations in hard rock By E. Hoek, P.K. Kaiser, W.F. Bawden