

Department: Mining Engineering

Division: Mining Exploitation and Rock Mechanics

Level and Major: BSc, Mining Exploitation and Rock Mechanics

Course Title: Drilling Engineering

Number of Credits: 2

Prerequisite (Corequisite): Field Geology and Mine Visit+ (Principles of Rock Mechanics)

Lecturer: Dr. Morteza Gholi Osanloo

Course Goals and Objectives

- Review of drilling method and exploratory drilling
- Introduction of all type drilling machines included percussive, rotary and percussive-rotary drills and its application on mine engineering division

Course Topics

- Drilling methods
- Air drilling
- Rotary percussion drilling
- Principal of drilling in well, hole, borehole
- Cable drilling
- Mud circulation
- Mud pump
- Rotary drilling
- Core drilling
- Coring tools and rigs
- Bits
- Drill pipes
- Fishing
- Rock strength introduction

Reading Resources

- Drilling methods by Dr. Morteza Osanloo
- Exploratory drilling