

Department: Mining Engineering

Division: Mining Exploitation and Rock Mechanics

Level and Major: BSc, Mining Exploitation and Rock Mechanics

Course Title: Cartography and Filed Study

Number of Credits: 2

Prerequisite: Structural Geology

Lecturer: Dr. Hossein Hassani

Course Goals and Objectives

Understanding the basics of geological phenomena and theoretical topics in the field of mining and geology, and visited some mines.

Course Topics

- Definitions, Fundamentals of Cartography, Scale, Mapping and Mapping survey, Universal Transverse Mercator (UTM), Geographical coordinates, Geological and Topographical mapping, Geotechnical Mapping, Field mapping and usage of Compass
- Linear and Planar Structures, Calculation of Strike and Dip of Linear and Planar Structures, Completing of Outcrop Patterns, Investigation of relation between Outcrop Pattern and Topography maps
- Drawing Profile, Structural Contour maps (UGC), Stereographic Projection, Statistical Analysis of Linear and Planar Structures, Field mapping of Fractures and their Analysis, Education of field mapping data Analysis and related software e. g. AutoCAD, Surfer and Dips
- Field Mapping Operation, Education of Aerial and Satellite photos, Education and usage of Field mapping Instruments, Dimensional Calculation of Thickness and Depth along a profile